

SITE REASSESSMENT

SDMS Document



122664

AMES RUBBER WANTAGE, SUSSEX COUNTY EPA ID NO.: NJD000818518

Volume 1 of 2

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
SITE REMEDIATION PROGRAM
BUREAU OF ENVIRONMENTAL MEASUREMENTS AND SITE ASSESSMENT

**AMES RUBBER CORPORATION
1440 ROUTE 565
WANTAGE, SUSSEX COUNTY, NEW JERSEY
EPA ID No. NJD000818518**

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NARRATIVE

SITE REASSESSMENT REPORT

Ames Corporation
1440 Route 565
WantageTwp, Sussex County, New Jersey
Block 7 Lots 7.03 & 8
Latitude: 40.193148° Longitude: 74.58065°
EPA ID No. NJD000818518

INTRODUCTION

The United States Environmental Protection Agency (EPA) has tasked the New Jersey Department of Environmental Protection (NJDEP) with a Site Reassessment to gather and evaluate new information on Ames Rubber Corporation (Ames) located in Wantage, Sussex County, to determine whether further action under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) is needed. (Attachment A)

Ames site is not listed on the National Priorities List (NPL), but an Eligible Response Site (ERS) Exclusion decision has been made at this site. (Attachment A)

On January 11, 1995, the NJDEP, Bureau of Field Operations, Underground Storage Tanks Unit issued a No Further Action (NFA) determination to Ames for the removal of a 10,000 - gallon home heating oil (No.2) underground storage tank (UST). (Attachment B)

On December 8, 1995, Ames entered into a Memorandum of Agreement (MOA) with the NJDEP to continue remediation of groundwater with NJDEP's oversight. This remediation consists of pumping and treating ground water and discharging it to surface water. (Attachment C)

Ames has continued the remediation of ground water through it's pump and treat system and submitted monthly summaries to NJDEP for review up until the year 2000. A recent copy of the February 2008 Surface Water Discharge Monitoring Report was recently obtained. Production on site has ceased and Ames is in the process of selling the site, triggering New Jersey's Industrial Site Recovery Act (ISRA). (Attachments D, E, O)

In September 2008, NJDEP obtained a draft site investigation from Kleinfelder East, Inc.(Kleinfelder), a contractor hired by Ames.

SITE LOCATION

The Ames site is located at 1440 Route 565 in Wantage, Sussex County, New Jersey and consists of two lots of a combined 28 acres. Lots 7.03 & 8 are located on Block 7 of the Wantage Tax Map. Lot 7.03 is a 27 acre lot upon which Ames Plant no. 3 is located. Plant no. 3 is a large metal and masonry building where the primary activities of the Ames occurred. Also located on Lot 7.03 is a 300,000 gallon water tank, a pad on which propane tanks are situated, a building housing a groundwater treatment system and various other utility – related fixtures.

According to D & B Duns Market Identifiers, there were 82 employees at the site in 2007. A site reconnaissance performed by NJDEP on April 9, 2008 revealed that Ames Plant no. 3 was closed and the property for sale. POR 15 Restoration Products was renting approximately one-third of Plant no. 3 in the front portion of the building. They utilized the space for the storage of bulk paints. The site also has 2 large paved parking areas outdoors. As of July 2008 the parking lots were being utilized by Franklin Sussex Auto Mall, a Jeep/Chrysler new car dealer, for extra storage of new vehicles. (Attachment I)

Lot 8 is a one-acre property where Ames Plant no.2 is located. Lot 8 is located in the northwestern portion of Lot 7.03. Ames currently owns both lots. Lot 8 is currently leased to Quantum Heating and Air Conditioning (Quantum). Quantum designs, installs and services custom air conditioning systems for both residential and commercial clients.

Both Lot 7.03 and 8 are bordered to the north by Sussex County Route 565. The western, southern, and eastern portion of Lot 7.03 is surrounded by the Wallkill River National Wildlife Refuge. The Refuge consists of marsh and swampland through which the Wallkill River flows. The Wallkill River borders the eastern boundary of the lot. (Attachment F and G, Map 1, 2, and 3)

SITE HISTORY

Ames has owned and operated the site from 1972 to the present. Plant no.3 construction started in 1972 and was completed in mid-1973. Prior to the construction of the plant, the property was used for agricultural purposes. An extension was added in 1977 and 1978 to expand product grinding operations. This building housed the bulk of the manufacturing at the Wantage facility. Manufacturing of photocopy feeder rollers and rubber boots for automobiles were the primary activities at Plant no.3. (Attachment L)

A general description of Ames production process involved heating bulk rubber (a polymer consisting of ethylene propylene diene monomer, clay filler and naphthenic oil) and applying the rubber with assorted coatings (polyurethanes and polysiloxanes) to metal parts or injecting directly into molds. (Attachment L)

Raw materials utilized at Plant no. 3 were solvents such as dimethyl formamide, TCE, MEK, MIBK, 1,1,1-trichloroethane (1,1,1-TCA), methylene chloride and toluene along with ethyl acetates, polyurethanes, polysiloxanes and fluoroelastomers. (Attachments K, L)

Ames acquired the Plant no. 2 property in 1966. Prior to the Ames acquisition, the building was utilized by a gunsmith for gun repairs, tooling and ammunition reloading. These activities involved the use of solvents, lubricants and gun powder in addition to machine tooling operations related to firearms. (Attachment L)

During Ames' use of Plant no. 2 from 1966 to 1985, various solvents (trichloroethylene, methylene chloride, 1,1,1-TCA, methyl ethyl ketone, and methyl isobutyl ketone) and polyurethanes, polysiloxanes, and fluoroelastomers were used to fabricate feeder rolls for photocopying machines and elastometric-coated metal products for the office. From 1985 to 2001, Plant no. 2 had been used primarily for storage of small quantities of bulk rubber and office activities. From 2001 to 2007, Kenne Corporation leased out the former Plant no. 2 who used it as office space. Currently the former Plant no. 2 building is leased out to Quantum Heating and Air Conditioning, who uses it as office space and storage. (Attachment J, L)

The facility has utilized an on site septic system since operation began and continues to operate present day. This septic system may have received chemical waste solutions via floor drains connected to the building sewer system. Leachate samples collected from the sanitary leaching field revealed elevated levels of toluene, 1,4-dichlorobenzene and non-target compounds, whereas soil samples reported undetectable levels of VOC's. (Attachment L)

As part of an in-house environmental assessment of the Wantage facility, Ames sampled one of its two potable water supply wells on or about July 12, 1984. The depth of the well was 300 feet. The results of the sampling indicated that the bedrock ground water under the site was contaminated with, including but not limited to 1,1-dichloroethane (1,1-DCA) at the concentration of 44 parts per billion (ppb), 1,1-dichloroethylene (1,1-DCE) at the concentration of 65 ppb and 1,1,1-trichloroethane (1,1,1-TCA) at the concentration of 580 ppb. The Maximum Contaminant Level (MCL) for 1,1-DCA is 50 ppb, for 1,1-DCE is 2 ppb and for 1,1,1-TCA is 30 ppb. The second potable well, 96 feet deep, was subsequently sampled and results indicated that it contained 1,1-DCA at a concentration of 34 ppb, 1,1-DCE at the concentration of 98 ppb, and 1,1,1-TCA at the concentration of 1,100 ppb. (Attachment J, L)

Additional sampling and analysis was conducted on a private potable well located approximately 150 feet northeast of the site. Results of analysis dated November 29, 1984 indicated that this private well was contaminated with 1,1,1-TCA at a concentration of 360 ppb. Ames notified the NJDEP and local authorities of its findings. Ames provided bottled water to the household as an alternative source of potable water. The house has since been demolished and the residents have relocated. (Attachments J, K, L)

On February 20, 1985, Ames informed NJDEP that the company intended to retain the services of Lion Technology, Inc., as a consultant to delineate the extent of the groundwater contamination detected in the on site potable well and to recommend ways of mitigating or eliminating the problems. (Attachment L)

On May 2, 1985, Ames submitted a completed New Jersey Pollution Discharge Elimination System / Discharge Surface Water (NJPDES/DSW) permit application for a surface water discharge permit for outfalls D001 and D002 to discharge pollutants to the Wallkill River. Ames utilized on site ground water for cooling water during production. NJPDES/DSW no. NJ0085561 was issued and as required by the NJPDES permit, Ames submitted Discharge Monitoring Reports (DMR's) to NJDEP starting with the reporting period of November 1989. (Attachment K, M)

On August 1, 1985, Ames submitted a report to NJDEP titled Phase I, Site Investigation at the Ames, Plants 2 and 3, Wantage, New Jersey. The report included a proposal to conduct an investigation to determine the source(s), areal extent, and nature of the ground water and surface water contamination at the site. (Attachment J, K)

On December 21, 1985, NJDEP approved Ames's Phase I investigation, which was submitted to NJDEP as an interim proposal subject to certain conditions. NJDEP also informed Ames that the company would receive an Administrative Consent Order (ACO) for execution. The ACO would contain, among other items, additional requirements for the investigation and the cleanup of the site. (Attachment K)

A report titled Remedial Investigation Work Plan was submitted to the NJDEP in September 1987 in response of various demands made by the NJDEP under an Administrative Consent Order (ACO) issued in August 1988. The investigative work associated with this report included soil and groundwater sampling and analysis to identify contamination at the site. Surface waters and wetlands adjacent to site

were sampled to determine if contamination from the site was migrating to those areas. Eight monitoring wells were installed and sampled during the RI. (Attachment K, L)

A Draft Remedial Investigation Report was issued in February 1989. This draft report summarized all previous soil and groundwater sampling. As a result of NJDEP comments, the final Remedial Investigation Report was issued in 1990. The results of the remedial investigation concluded that four additional on-site monitoring wells should be installed and sampled to further delineate groundwater flow and contaminant migration pathways. Two 48 hour groundwater pumping tests were recommended to characterize aquifer properties to assist in determining remedial actions. (Attachment L)

During June 1990, a Draft Hydrogeological Test Proposal was submitted to NJDEP, Bureau of Water Allocation, which defined the methods and procedures to be employed by Vectre Corporation during on-site hydrological testing (pump testing). Shortly thereafter, Ames experienced encrustation and water yield problems with well #2 (PW#2) which was the well selected for hydrological testing. A new production well (PW#3) was installed by Ames during February 1991. (Attachment L)

Also in 1990, Congress established the lands surrounding the Ames site as the Wallkill River National Wildlife Refuge. The management emphasis at the refuge is on Federally-listed endangered and threatened species, migrating waterfowl and shorebirds, nesting and wintering grassland birds and forest-dwelling birds. (Attachment F)

In May 1991, Vectre Corporation submitted a report titled Groundwater Remediation Plan for the site to NJDEP.

Four areas of concern were investigated around Plant no.3 as part of a Groundwater Remediation Plan prepared by Vectre Corporation in 1991. These areas were: 1) Former drum storage 2) 10,000 gallon heating oil UST 3) sanitary leaching field and 4) current drum storage area. The soil adjacent to the former drum storage was sampled and contained elevated levels of petroleum hydrocarbons, but no volatile organic substances were found above action limits. The samples from the 10,000 gallon UST area also contained elevated levels of petroleum hydrocarbons and volatile organic substances such as toluene (12.5 ppm). The sanitary leaching field may have received chemical waste solutions via floor drains formerly connected to the building sewer systems. Leachate samples revealed levels of toluene, 1,4-dichlorobenzene and non targeted compounds, whereas soil samples reported undetectable levels of VOC's. The drum storage area had a concrete pad and berms. The area was well maintained and was not believed to a source of contamination according to this report. (Attachment L)

Five areas of concern were investigated around Plant no.2 as part of a Groundwater Remediation Plan prepared by Vectre Corporation in 1991. These areas were: 1) two floor drains discharging to the ground 2) former drum storage area 3) 550 gallon heating oil UST 4) former cooling water discharge line and 5) sanitary leaching field. The floor drains and cooling water discharge line have not been used since 1985, and have been filled with grout. Soil analyses from this area revealed contamination with volatile organics, base neutrals and TPHs below NJDEP action levels. The former storage area and the 500 gallon UST containing #2 heating oil have been removed. No contaminants were detected above action limits for these locations. The septic tank was sampled and the analysis revealed no volatile /semivolatile organic compounds or metals above action levels. (Attachment L)

Based on investigations of the hydrogeologic characteristics and groundwater contamination of the site, a pump and treat system was recommended as the best alternative to remediating ground water. (Attachments D and L)

On July 13, 1992 the NJDEP approved air stripping technology as an acceptable ground water remedial action alternative per the 1988 ACO. R.E. Wright Associates, Inc. (REWAI) was hired in July 1992 to complete the design and construction of an appropriate pump and treat system. As part of the remedial strategy design, REWAI was requested to complete a Remedial Action Plan. REWAI designed a remedial system consisting of: "(1) a groundwater collection system comprised of three existing wells (RW-2, MW-6B and PW-1) equipped with automated pumping systems; (2) a conveyance system consisting of piping (electric and water) from each of the three recovery wells to the treatment facility, and from the treatment facility to Ames' existing process water storage tower; (3) a prefabricated treatment building, equipment slab, and foundation; and (4) a treatment system consisting of an equalization tank, packed tower aerator (PTA) and blower, two transfer pumps, and a full electrical control system equipped with appropriate system safeguard features." (Attachment D)

In September 1992, an Environmental Priorities Initiative / Preliminary Assessment conducted by Ebasco Services Incorporated identified 8 Solid Waste Management Units (SWMUs) at the site. SWMUs at the site included the hazardous waste roll-off dumpster (SWMU1), thermal oxidizers at the site (SWMU2), a hazardous waste drum storage area, (SWMU3), an MEK satellite accumulation area (SWMU4), a methylene chloride satellite accumulation area (SWMU5), a 1,1,1-trichloroethane satellite accumulation area (SWMU6), former drum storage areas (SWMU7) and former floor drains (SWMU8). The report also revealed discharges that facility personnel believed groundwater contamination could have been caused by discharges in the former drum storage areas (SWMU7). (Attachment J)

In October and November of 1992, sampling of the Wallkill River and associated wetlands near Ames took place. Two samples (S1 and S2) were collected south east of the Ames facility where an outfall discharge non-contact process cooling water into the wetlands. S-1 was a water sample and S-2 was sediment sample.

Three additional samples points were located in the Wallkill River. S-3 was collected upstream from the facility. The water from this location provided background water quality data. S-4 and S-5 were collected downstream from sample location S-3 and the Ames facility.

S-1 contained 1,1,1-trichloroethane at a concentration of 35 ppb, below the NJDEP Surface Water Fresh Water (FW2) Criteria of 120 ppb.

In September 1993, a New Jersey Pollution Discharge Elimination System (NJPDES) permit was issued to the facility to allow the discharge of approximately 40,000 gallons per day of treated ground water via outfall DSN 001A (located approximately 200 feet southwest of Plant no.3). The outfall eventually discharges into wetlands which in turn discharges into the Wallkill River. The contaminated ground water is treated by air stripping. Currently this permit monitors the following parameters: Flow (gpd), Total Organic Carbon (TOC) in part per million (ppm), Petroleum Hydrocarbons (TPH), Temperature (°C), pH (su) and 1,1-dichloroethane, 1,1-dichloroethylene, and 1,1,1-trichloroethane in parts per billion (ppb). (Attachments M and Map 4B)

On August 9, 1994 one 10,000-gallon No.2 fuel oil UST and associated piping was excavated and removed from the Ames facility. Ten post excavation soil samples were collected and submitted to a NJDEP-certified laboratory for total petroleum hydrocarbon analysis. The highest concentration exhibited was 300 ppm, below the 1,000 ppm most stringent NJDEP criteria. (Attachment N)

On January 11, 1995, the NJDEP, Bureau of Field Operations, Underground Storage Tanks Unit issued a No Further Action (NFA) designation for the removal of the above 10,000-gallon fuel oil No.2 UST. (Attachment B)

A letter dated April 6, 1995 from Joseph Douglass, Ames director of regulatory affairs to Tom McClachrie, NJDEP case manager regarding the Remedial Action Plan- Phase 1 System Effectiveness Report stated that the final treatment system will have two packed towers, PTA-1 and PTA-2. PTA-1 will treat the water from wells PW-1, RW-2 and MW-6B, the wells used for aquifer control and restoration. PTA-2 will be dedicated to production well PW3 for plant supply purposes.

On August 25, 1995 the NJDEP terminated the ACO stating that all of the compliance scheduled requirements of the ACO had been completed.

On November 27, 1995 NJDEP revoked the NJPDES/DGW permit due to fact the NJDEP revised its strategy for management of contaminated sites stating it would no longer utilize the NJPDES permit as the oversight mechanism for approval of monitoring, investigative or remedial programs.

On December 8, 1995 Ames entered into a Memorandum of Agreement (MOA) with the NJDEP in order to conduct a Remedial Action-continued remediation of ground water with NJDEP's oversight. This MOA replaced the NJPDES/DGW permit. (Attachments C and K)

Since entering into the MOA, Ames continues to submit annual status reports on the ground water remediation program. Sampling gauging of key monitoring wells has also continued. MW-4 continues to have the highest levels of 1,1,1-TCA, 1,1-DCA and 1,1-DCE. (Attachment T)

NJDEP conducted a site visit on April 9, 2008. The visit revealed that Plant no.3 was inactive and the property was for sale. Approximately two thirds of Plant no.3 is rented to POR 15 Restoration Products who uses it as a warehouse for storing their finished latex paint products. The remaining one third of Plant no.3 is currently utilized by Ames for research and development activities relative to aerospace product development, including intermittent minimal spraying and coating operations. De minimus quantities of raw materials are kept on site associated with the R& D operations. The parking lot is currently being utilized by Franklin Sussex Auto Mall, Inc., a new car dealer, for storage of new vehicles. The former Plant no.2 building is rented to Quantum Heating and Air Conditioning, who uses it as office space and storage. The Ames site was well maintained. Monitoring wells were visible and in good shape. (Attachment U)

Seven main AOCs were identified in the September 2008 Kleinfelder East, Inc.'s Preliminary Assessment (PA) of Ames. These AOCs are presented below:

AOC Names	Description	Outcome
<u>AOC-1</u> 10,000 gallon UST	This was installed in 1994. It is a double-walled tank with a leak detection monitoring system. Evidence of surface spillage was found.	The surface spillage was found to be related to the emergency generator (AOC-7).
<u>AOC-2</u> Loading dock	Loading dock with a dry well discharging directly to the soil.	Investigated in the Site Investigation (SI).

AOC Names	Description	Outcome
<u>AOC-3</u> General trash dumpster and compactor	Evidence of staining	Staining was subsequently attributed to grease from the wheel bearings
<u>AOC-4</u> Septic System, Plant No. 2	Consists of septic system, which is used for disposal of sanitary waste.	Previous investigations have not revealed concerns associated with this septic system. Not considered an AOC requiring further evaluation.
<u>AOC-5</u> Septic System, Plant No. 3	Consists of septic system, which is used for disposal of sanitary waste.	Previous investigations have not revealed concerns associated with this septic system. Not considered an AOC requiring further evaluation.
<u>AOC-6</u> Reported dry well or pit	Structure was reportedly a dirt bottom dry well identified on a siteplan as Solvent Collect Tank, E2.	Ames will collect soil samples and analyze them for VOCs and a geophysical survey will be conducted to determine whether this structure still exist.
<u>AOC-7</u> Stained soil and vegetation	Proximal to pad - mounted emergency generator	This AOC was investigated and remediated during the SI.

(Map 4B Attachment U)

In September 2008, NJDEP obtained a draft site investigation from Kleinfelder, a contractor hired by Ames.

Based on the findings of an Industrial Site Recovery Act (ISRA) PA, Kleinfelder, together with Ames, conducted a Site Investigation of four targeted AOCs to characterize site soil conditions resulting from historical property usage. Additionally, a review of the existing groundwater remediation system operating under the terms of an existing MOA and historical groundwater data, sediment sampling, and surface water sampling is included in this SI Report. This SI Report also included a Baseline Ecological Evaluation and a Vapor Intrusion Assessment.

The four AOCs investigated during the SI are described as:

AOC 1: Stained soil proximal to underground storage tank

AOC 2: Loading dock and associated drywell

AOC 3: Trash dumpster and compactor with associated stained soil

AOC 6: Stained soil and stressed vegetation by the emergency generator (Note: AOC 7 in the PA is AOC 6 in the draft SI)

The draft SI stated that “All other areas of concerns identified in the PA were determined to not need additional investigation. Ames conducted the clean out / remediation of AOC 1, AOC 2, and AOC 3. De minimus quantities of impacted soil were removed from AOC 1, AOC 2 and AOC 3, and confirmatory samples were collected from AOCs 1 and 7. Staining at AOC 3 was attributed to lubricating grease on the wheels of the dumpster, and no confirmatory sample was collected after a visually clean area was reached just below the surface. No samples were collected from the base of AOC 2 due to the continuing

presence of standing water from recent precipitation events. Instead, a composite sample was collected from the excavated material to determine whether the removed material was impacted by any chemicals of concern. For AOC 7, Kleinfelder provided field screening and sampling of excavated soils. Two confirmatory soil samples were collected from AOC 7. A composite soil sample of excavated soil from all three AOCs was also collected for waste classification purposes. “ (Attachment T)

The draft SI also stated that “As noted in the ISRA PA, AOC 6 consists of a reported dry well or pit which was historically identified as an underground storage tank, and later delisted. This structure is reportedly a dirt-bottom dry well identified on a site plan as Solvent Spill Collect Tank E2, and is noted as having a 500-gallon capacity. The location appears to be under a concrete pad beneath the former thermal oxidizer used by the Wantage facility when it was in full operation. Ames will remove the section of the oxidizer above this tank location, and collect four (4) soil and one grab groundwater sample from this area in order to determine the potential impact, if any, associated with this structure. Soil samples will be analyzed for volatile organic compounds with a forward library search, and appropriate field and trip blanks will also be prepared and analyzed. A geophysical survey will be conducted to determine whether this structure still exists or has been removed as part of historical site development activities. “ (Attachment T)

CURRENT HAZARD ASSESSMENT

A pump and treat system conducting remediation of the contaminated ground water is currently operating. The current hazard that exists at the site is contaminated groundwater and possible surface water contamination emanating from this contaminated ground water and recharging the surface water of the Wallkill River. (Attachments D, M and O)

SOURCES

According to facility personnel, it is believe that ground water contamination could have been caused by discharges in the former drum storage areas (SWMU 7). (Attachment J)

Another possible source of ground water contamination may possibly be the reported dry well or pit (reported as AOC 6 in Kleinfelder PA) as reported above. Proposed soil sampling along with a geophysical survey will either rule this as a source or not. (Attachment T)

Ground Water Migration Pathway

Glacial deposits cover bedrock in the area. The uppermost deposit beneath the site is of Wisconsin age and consists of stratified sand and gravel deposited at the ice margin by meltwater streams. Immediately east of the facility is the margin between these stratified deposits and a discontinuous fill deposit. The fill deposit consists of unstratified and unsorted boulders and gravel in a matrix of sand, silt, and clay, deposited directly from ice. The thickness of the glacial deposits varies considerably in the area and the nearest measurement was obtained approximately 0.5 mile west of the facility, where the depth to bedrock is 91 feet. (Attachment J)

At the base of the glacial deposits is the Allentown Formation, a dolomitic rock (magnesium limestone). The dissolution of the limestone can result in wells of high yield. Such water is found both under unconfined and semi-artesian conditions. The depth to ground water varies from approximately 18 feet

below ground surface (bgs) to approximately 75 (bgs) at the site. The direction of the groundwater flow is to the northeast, toward the Wallkill River. (Attachment J)

Both buildings on-site are not connected to any wastewater treatment plant and have septic sewage treatment systems.

The site has a documented release of contaminants to the ground water. Bedrock ground water under the site is contaminated with 1,1-DCA, 1,1-DCE and 1,1,1-TCA, carbon tetrachloride, vinyl chloride and trichloroethene (TCE) at levels above the NJGWQS. Below is the most recent assessment of ground water quality taken from the recent draft Kleinfelder SI report:

Sampling Date	11/22/2002	11/24/2003	11/19/2004	11/3/2005	11/9/2006	10/31/2007
Wells Sampled	MW-1, MW-2, MW-4, MW-6C, MW-7, MW-9, RW-2, PW-1, PW-3, OS-1	MW-1, MW-2, MW-4, MW-6C, MW-7, MW-9, RW-2, PW-1, PW-3, OS-1	MW-1, MW-2, MW-4, MW-6C, MW-7, MW-9, RW-2, PW-1, PW-3, OS-1	MW-1, MW-2, MW-4, MW-6C, MW-7, MW-9, PW-1, PW-2, PW-3, OS-1	MW-1, MW-2, MW-4, MW-6C, MW-7, MW-9, RW-2, PW-1, PW-3, OS-1	MW-1, MW-2, MW-4, MW-6C, MW-7, MW-9, RW-2, PW-1, PW-3, OS-1
Analysis Conducted	VO+10	VO+10	VO+10	VO+10	VO+10	VO+10
Constituents above the NJDEP GWQS	DCE TCE TCA	DCE TCE DCA TCA	DCE TCE TCA	DCE TCE DCA TCA	DCE DCA TCA Methylene Chloride	DCE TCA Carbon Tetrachloride Vinyl Chloride
Groundwater Flow Direction	Shallow: NE Deep: NE	Shallow: NE Deep: NW	Shallow: NE Deep: NW	Shallow: NE Deep: NW	Shallow: NE Deep: NW	Shallow: NE Deep: NW

(Attachment T)

Note:

VO+10 = Volatile Organics plus a ten peak scan TCA = 1,1,1-trichloroethane

DCE = 1,1-dichloroethene DCA = 1,1-dichloroethane

Trichloroethene, 1,1-dichloroethene, 1,1,1-trichloroethane and 1,1-dichloroethane, methylene chloride, carbon tetrachloride and vinyl chloride were detected at concentrations above the NJDEP Groundwater Quality Standards (GWQS) in select site monitoring wells as detailed in Tables 1 through 6. Graphical trend graphs were created for dissolved concentrations in site monitoring wells during the

previous six sampling events. Decreasing trends are noted for total volatile organics (VOCs) in the monitoring wells, with the exception of MW-9. Total VOCs were detected in MW-9 at 512 ug/L during the 2005 ground water sampling event. Total VOCs were detected in MW-9 at 0.532 ug/L and 4.12 ug/L in 2006 and 2007, respectively, indicating a decreasing trend for the previous three years. (Attachment T)

Targets Associated with the Ground Water Migration Pathway

There are 22 public supply wells located within 4 miles from the site. The nearest well, approximately 1.92 miles east of this site, is operated by the Vernon Water Company and designated Well 1. All 22 wells collectively serve approximately 6,230 people. There are an unknown number of private wells within one mile of site, no inventory to date has been made of these. (Map 5, Attachment P)

According to the Baseline Ecological Evaluation (BEE) included in the recent draft Kleinfelder SI report: "Groundwater flow has historically been in the northeastern direction. Downgradient receptors include the Wallkill River, the potential habitats of state endangered and federally listed species, highlands planning areas, wetlands and forested wetlands." (Attachment T)

Surface Water Pathway

The nearest surface water is the Wallkill River, which borders the eastern portion of the site.

Since September of 1993, a NJPDES permit has allowed the facility to discharge approximately 40,000 gpd of treated ground water via outfall DSN 001A to the Wallkill River prior to being discharged. Currently this permit monitors the following parameters: flow (gpd), TPH, temperature (°C), pH (su) and 1,1-dichloroethylene. (Attachment O)

A 1992 Final Environmental Priorities Initiative / Preliminary Assessment (EPI-PA) summarized a release of contaminants from the site to the groundwater and a suspect release to the surface water. It further recommended that downstream sampling of the Wallkill River be preformed to verify whether there were contaminants that have migrated to the surface water. (Attachment J)

In October and November of 1992, sampling of the Wallkill River and associated wetlands near Ames took place. Two samples (S1 and S2) were collected south east of the Ames facility where an outfall discharge non-contact process cooling water into the wetlands. S-1 was a water sample and S-2 was sediment sample. Three additional samples points were located in the Wallkill River. S-3 was collected upstream from the facility. The water from this location provided background water quality data. S-4 and S-5 were collected downstream from sample location S-3 and the Ames facility. S-1 contained 1,1,1-trichloroethane at a concentration of 35 ppb, below the NJDEP Surface Water Fresh Water (FW2) Criteria of 120 ppb. (Attachment V)

The most recent Surface Water Discharge Monitoring Report from February 2008 submitted to the NJDEP, Division of Water Quality shows groundwater monitoring is continuing on site.

Targets Associated with the Surface Water Migration Pathway

There are no surface water intakes for potable water supply within 15 miles downstream Wallkill River. (Attachment J)

According to the Baseline Ecological Evaluation (BEE) included in the recent draft Kleinfelder SI report: “Historically, untreated process water was discharged through an outfall into a wetlands area southeast of the Ames Rubber facility, creating a potential migration pathway to the wetlands, Wallkill River and other downgradient receptors.” (Attachment T)

The Wallkill River is classified as a trout maintenance surface water, and is reportedly used for sport fishing. (Attachments F and G)

Soil Exposure Pathway

On August 9, 1994, one 10,000-gallon UST No. 2 fuel oil was closed by removal from the southeast corner of former Plant 3. Confirmatory soil samples were taken and all were below the NJDEP Impact to Ground Water Soil Cleanup Criteria IGWSCC. On January 11, 1995, the NJDEP, Bureau of Field Operations, Underground Storage Tanks Unit issued a NFA designation for this area. (Attachment N)

Based on these results, a soil exposure pathway does not exist.

Targets Associated with the Soil Exposure Pathway

The site is located in a non-residential area. There are no residences, schools or day care centers within 200 feet of the site property. There are approximately 19 people employed at the two current businesses operating at the site.

There are no targets associated with the soil pathway.

Air Migration Pathway

Currently Ames has two air permits issued through NJDEP. Permit # E9801 / Log No. 01971990 is for it's emergency generator. And permit # PCP070001 is for it's two ovens, two spray booths, and spray booth particle filters. (Attachment U)

In terms of Vapor Intrusion, the recent draft Kleinfelder SI reported:

“Two buildings that are located onsite which are occupied during the day. Trichloroethene, 1,1-dichloroethene, 1,1,1-trichloroethane and 1,1-dichloroethane were detected above the NJDEPGWQS during the most recent groundwater sampling event. These compounds were not detected above the NJDEP Vapor Intrusion Ground Water Screening Levels in the site monitoring wells. Therefore, a vapor intrusion investigation is not warranted at this time.” (Attachment T)

A release to the air migration pathway is neither observed nor suspected.

Targets Associated with the Air Migration Pathway

There are approximately 18,600 people that reside within 4 miles of the site. There are approximately 69 acres of wetlands within ¼ mile of the facility. A total of 5,936 acres of wetlands are within 4 miles of the facility. (Map 8)

CONCLUSIONS

Currently the site is working under an MOA with NJDEP to remediate contaminated ground water. A pump and treat system with monthly monitoring is in place.

The site is currently for sale and ISRA was triggered with the cessation of activity at the site. Environmental consultant Kleinfelder has been retained by Ames as their consultant in this process. Kleinfelder has currently conducted a PA / SI as part of this process. (Attachments T & U)

Historical on-site soil contamination has been documented at the site as a result of past waste handling practices.

According to the recent draft Kleinfelder SI report:

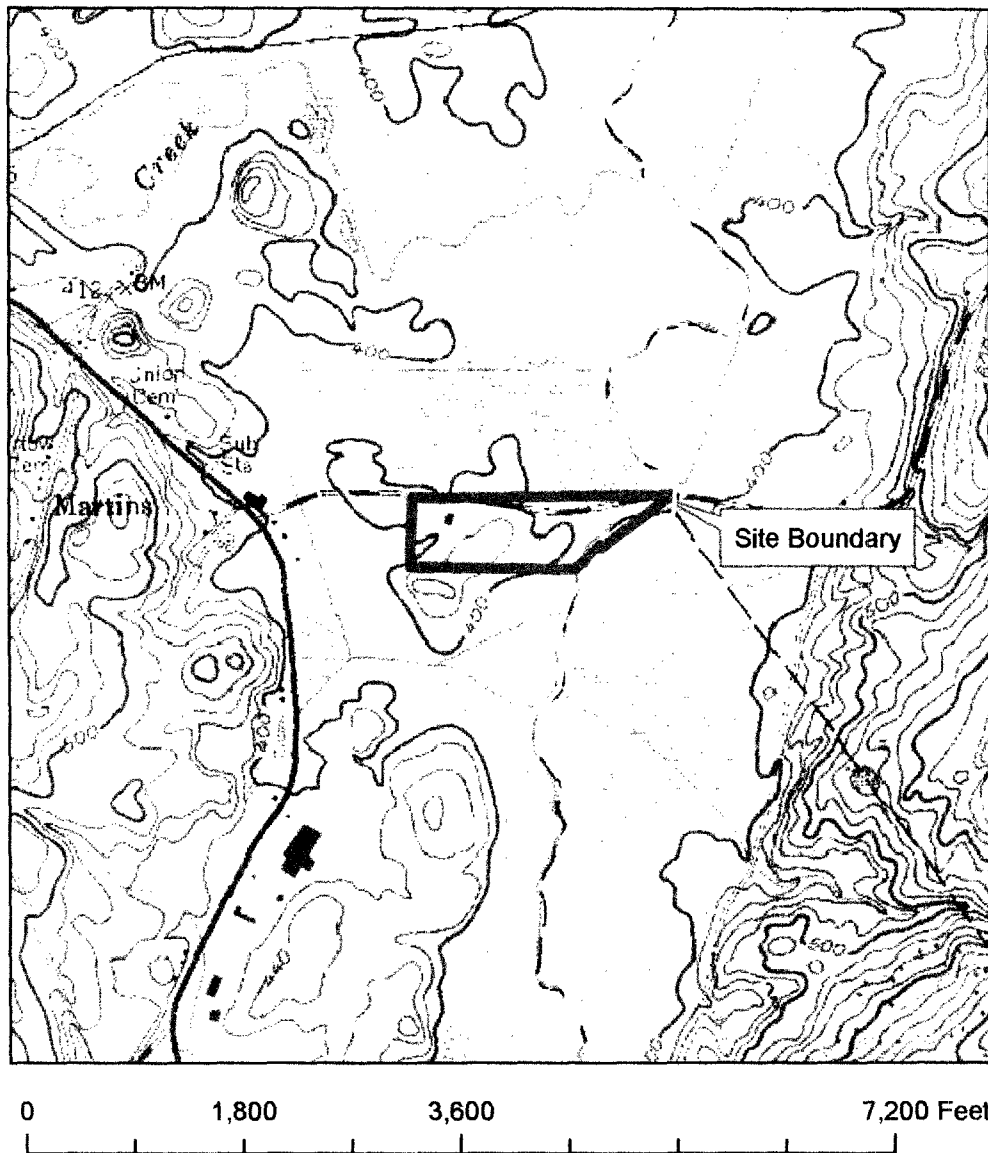
“Based on the results of the site investigation and the hot spot removals of contaminated soil, no impacts remain at the site. AOCS 2 and 3 were cleaned out/excavated until there was no sign of staining and no visual or olfactory evidence of remaining impacts. AOC 6 was also excavated until no visible signs of impacts remained. Additionally, 2 confirmatory samples from AOC 6 indicated that no impacts remained at the AOC. Therefore, No Further Actions are warranted for surficial AOCs at the Ames site. Ames is proposing to investigate a former dry well proximal to MW-4.” (Attachment T)

Based on these results and an overall HRS Quickscore of less than 28.5, the site warrants a No Further Remedial Action Planned designation under CERLA.

Submitted by: Ray Pogwist, CHMM
Senior Environmental Specialist
NJDEP/Bureau of Environmental Measurements and Site Assessment
August 25, 2008

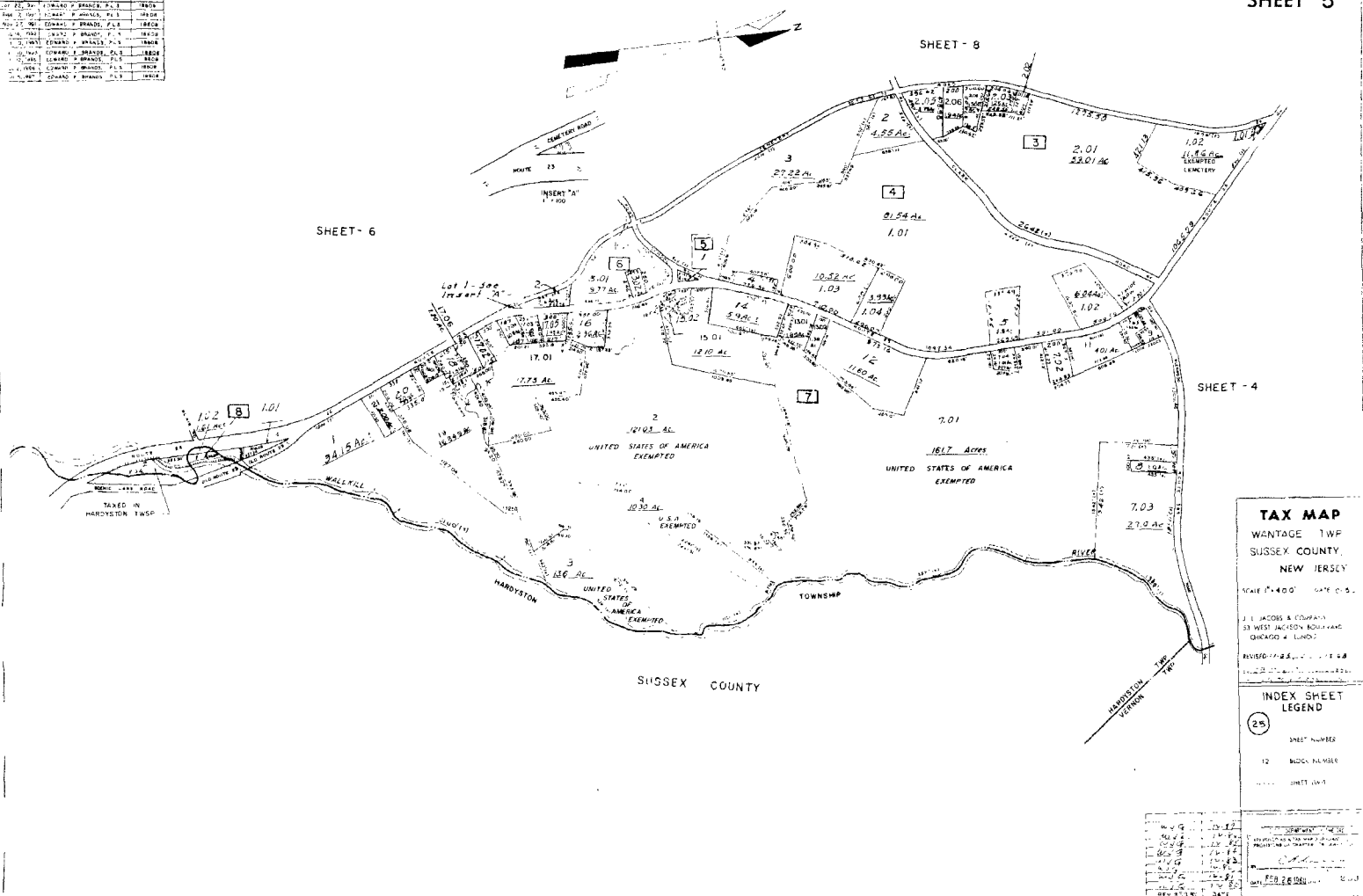
MAPS

AMES RUBBER CORPORATON
1440 ROUTE 565
WANTAGE, SUSSEX COUNTY



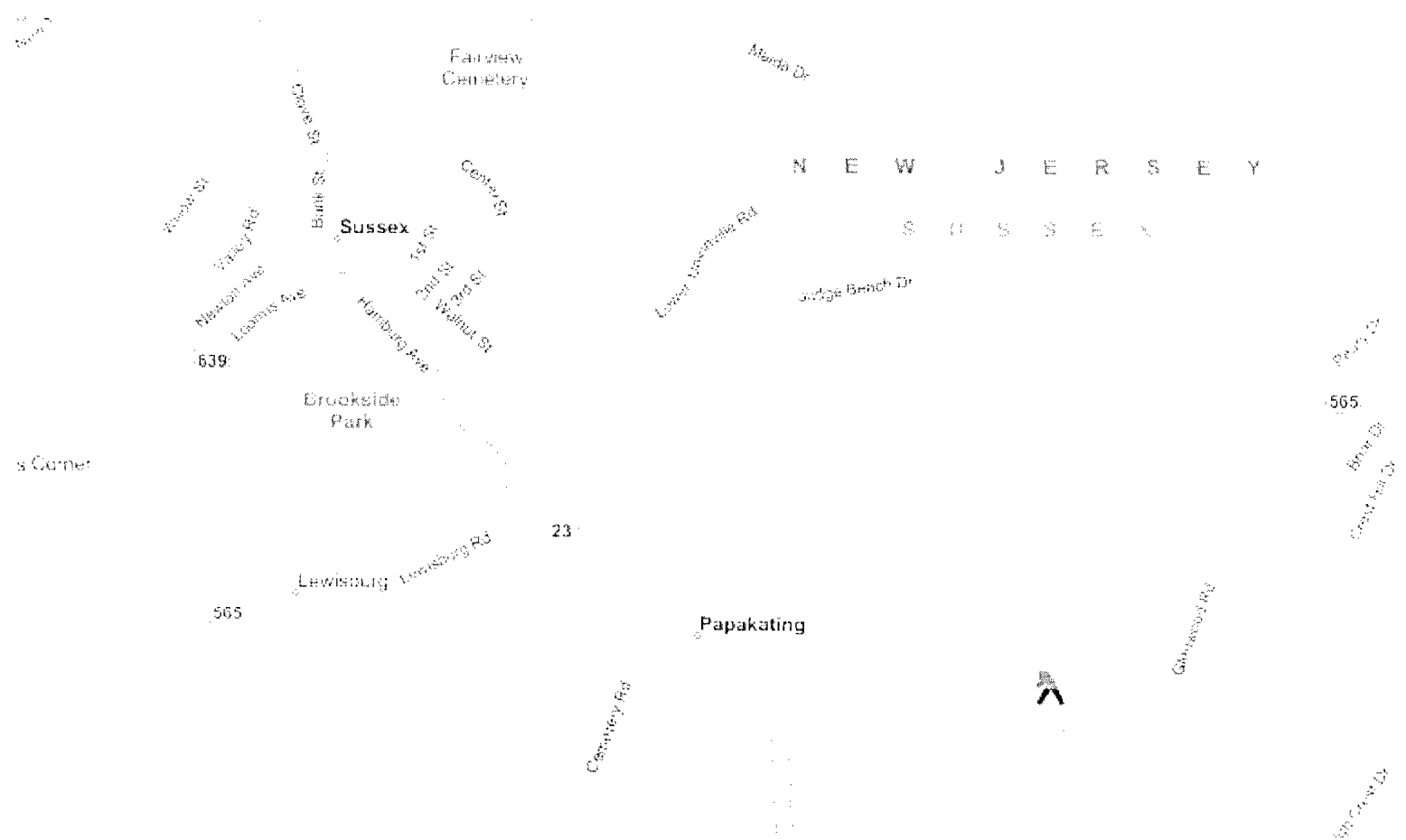
MAP 1

REVISIONS		
DATE	NAME	NO.
07-22-56	EDWARD F. BRANDS, P.L.S.	1800B
08-04-56	EDWARD F. BRANDS, P.L.S.	1800B
Nov 27, 1961	EDWARD F. BRANDS, P.L.S.	1800C
1-10, 1962	EDWARD F. BRANDS, P.L.S.	1800C
1-2, 1963	EDWARD F. BRANDS, P.L.S.	1800C
1-12, 1965	EDWARD F. BRANDS, P.L.S.	1800C
1-12, 1965	EDWARD F. BRANDS, P.L.S.	1800C
1-12, 1965	EDWARD F. BRANDS, P.L.S.	1800C
1-12, 1965	EDWARD F. BRANDS, P.L.S.	1800C

TAX MAP
MAP 2

Map | [Directions](#)

Maps



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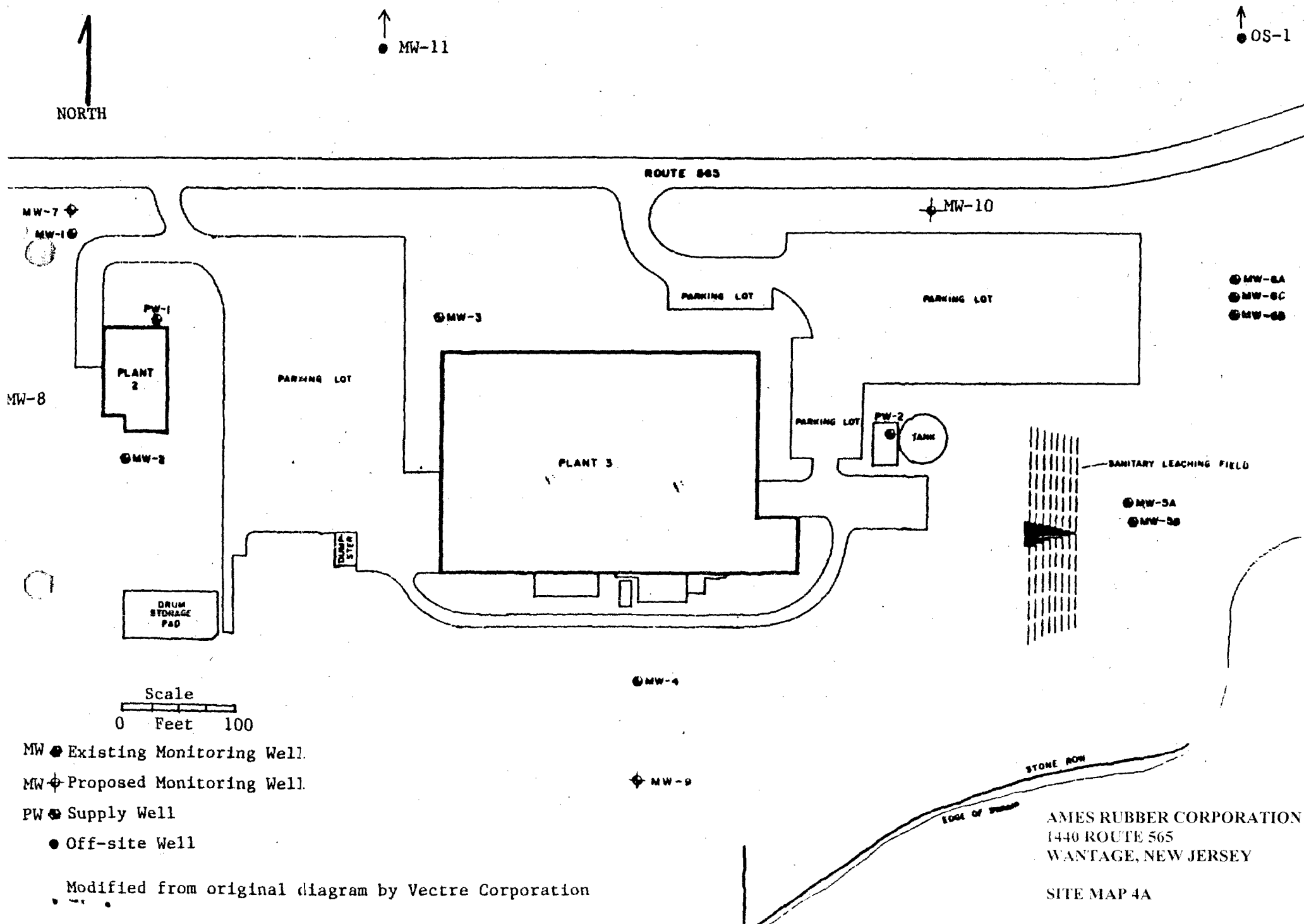
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Map data provided by Longitude and Latitude.

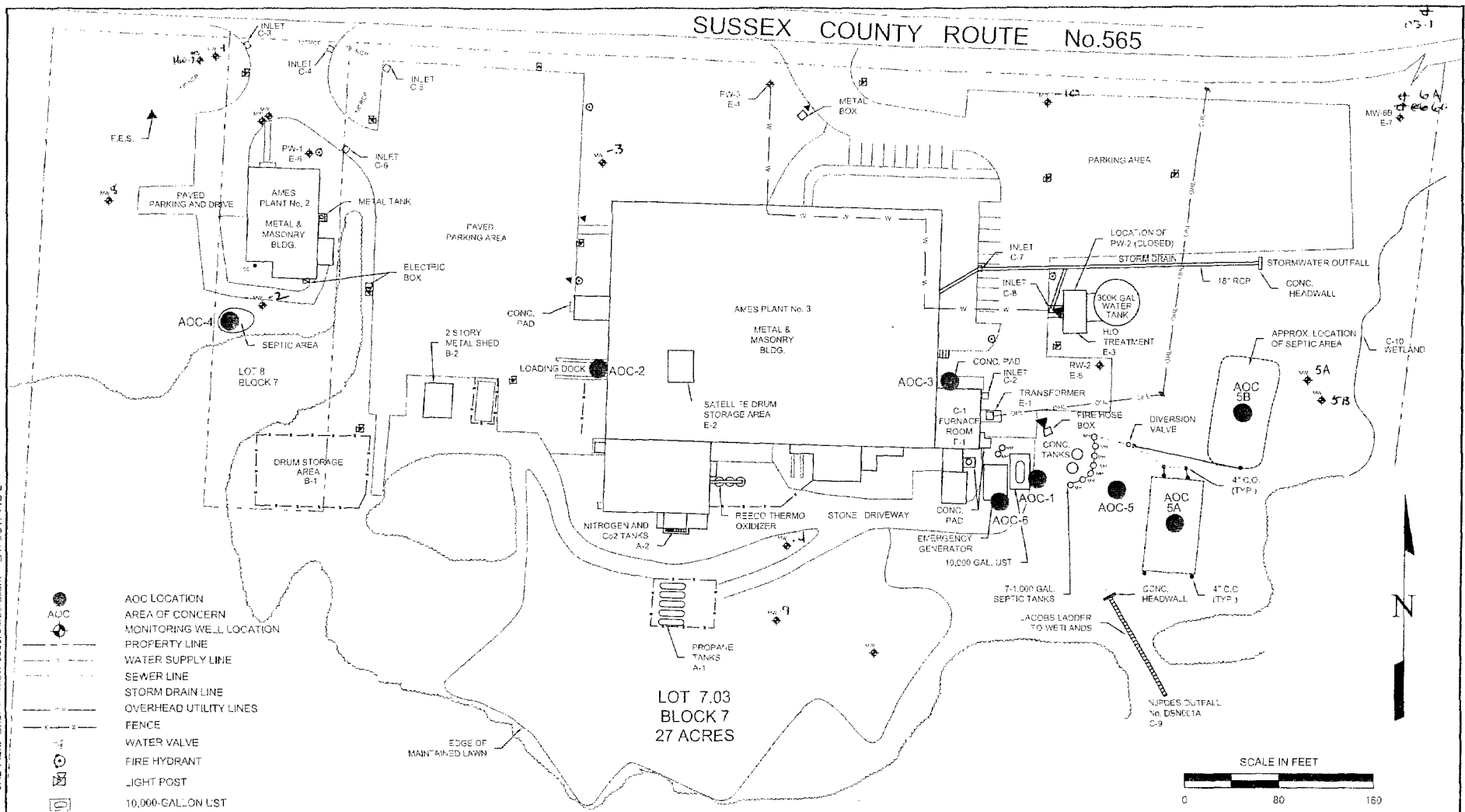
AMES RUBBER CORPORATION
1440 ROUTE 565
WANTAGE, NEW JERSEY

SUSSEX COUNTY MAP
MAP 3

AMES RUBBER CORPORATION
Wantage Facility
Monitoring Well Locations



CAD FILE: G:\CAD\AmesRubberCorporation\ LAYOUT: FIG-2



<p>© by Kleinfelder Inc., 2008</p>		<p>DRAWN BY: DLM</p> <p>REVISED BY: JL</p> <p>CHECKED BY: JC</p> <p>DATE: 04/28/2008</p> <p>APPROVED BY:</p>	<p>SITE PLAN WITH AREAS OF CONCERN</p> <p>AMES RUBBER CORPORATION 4440 ROUTE 565 WANTAGE, NEW JERSEY</p> <p>PROJECT No. 93078</p> <p>FILE NAME: WANTAGE.dwg</p>	<p>KLEINFELDER</p> <p>1279 ROUTE 300, SECOND FLOOR NEWBURGH, NY 12550 PH: (845) 567-6530 FAX: (845) 567-6542 www.kleinfelder.com</p>	<p>FIGURE</p> <p>2</p>
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PLOTTED: 28 Apr 2008, 10:09am, JLubbers

AMES RUBBER CORPORATION
1440 ROUTE 565
WANTAGE, NEW JERSEY

SITE MAP 4B

100,000 GPD WATER WITHDRAWAL POINTS
WITHIN 5 Miles OF :

X : 469956

Y : 859541

40.11.35
74.34.50

SCALE : 1 : 63,360

PLOT PRODUCED BY :

NJDEP

WATER SUPPLY

BUREAU OF WATER ALLOCATION

P.O. Box 426

TRENTON, NJ 08625

DATE : 3/26/2008

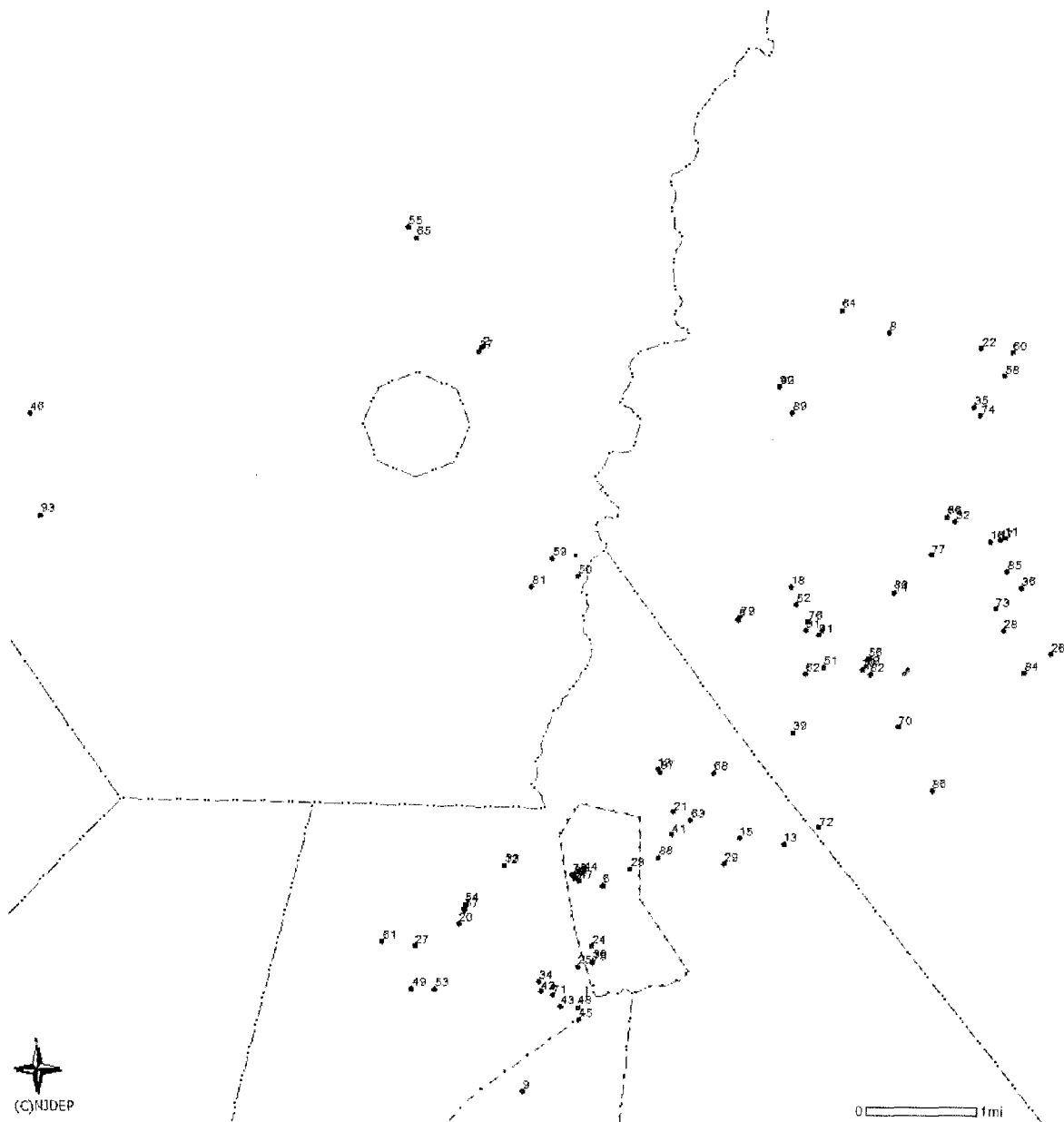
SUBJECT TO REVISION

Legend

- Water Allocation, Diversion and Monitoring Locations

- - - Municipalities

- Counties



AMES RUBBER CORPORATION
1440 ROUTE 565
WANTAGE, SUSSEX COUNTY
WATER WITHDRAWAL MAP
MAP 5

Withdrawal Points Tabular Data

Sequence Number (BWA)	PI ID Number (Preferred NJAMS ID)	PI Name	Activity Number	SI Category Code	SI Designation	SI Description	Distance From NY Origin - ft. (BWA)	County Code	Municipality Code	SPE 83A	SPE 83A	NY Accuracy - Units	Dep. to Top of Open Interval - Units	Dep. to Bot. of Open Interval - Units	Elevation (ft)	Z Accuracy - Units	Geologic Unit Code	Hydrogeologic Unit Code	Rated Pump Capacity - Units	RRM BWA ASU B.W.F. MD (BWA)
1	2415P	AMES RUBBER CORP	WAP990001	WSWL	2200027743	WELL 14B	15045.09	19	09	470127.61	844496.44	100ft	31ft	41ft	409	1Feet	1440	79	10gm	470
2	10284W	REGENCY AT SUSSEX	WUR950001	WSWL	2200011813	WELL B	10637.06	19	24	465488.82	869194.03	1000ft		302ft	515	10Feet	3390	8199	70gm	66
3	10313W	VERNON WATER CO	WUR940001	WSWL	WELL # UNKNOWN	WELL 7	17397.25	19	22	487265.66	861286.00				620	10Feet	4130	8999	12gm	281
4	10313W	VERNON WATER CO	WUR940001	WSWL	2200007595	WELL 2	11938.19	19	22	481300.85	855823.16	1000ft		72ft	620	10Feet	4130	8999	5gm	677
5	2097P	LEGENDS RESORT	WAP010001	WSWL	2200010024	WELL 2	8171.99	19	22	477554.83	856533.55	500ft	46ft	56ft	425		1020	129	200gm	692
6	5166	HAMBURG BOROUGH	WAP040001	WSWL	2200005626	WELL 2	15426.01	19	09	471343.00	844177.00	40ft	78ft	97ft	410	20Feet	1410	116	500gm	856
7	5354	HARDYSTON TWP MUA CRYSTAL SPRINGS	WAP040001	WSWL	2200024283	INDIAN FIELD 1	17209.50	19	11	464834.00	843111.00	40ft	79ft	130ft	560	20Feet	3780	8399	100gm	1835
8	10313W	VERNON WATER CO	WUR940001	WSWL	2200010102	WELL 9	17863.03	19	22	484516.48	869888.77	1000ft	51ft	393ft	620	10Feet			20gm	1857
9	10661W	RIVERDALE QUARRY CO	WUR910001	WSWL	2200026660	WELL 1	25070.80	04	06	467593.21	834581.36						4390	8999	150gm	1894
10	5370	UNITED WATER NJ VERNON VALLEY	WAP070001	WSWL	2200024844	WELL 6	14411.29	19	22	483339.00	854194.00	150ft	119ft	129ft	448	10Feet	3790	8399	600gm	1773
11	2457P	MOUNTAIN CREEK RESORT INC	WAP030001	WSWL	2200020240	WELL 3	20044.35	19	22	489984.60	860339.90	300ft	165ft	173ft	430	10Feet	3790	8399	250gm	1251
12	10357W	WALKILL VALLEY REG HIGH SCHOOL	WUR930001	WSWL	2200019448	WELL 2	14799.33	19	11	466686.01	845107.05	1000ft	69ft	224ft	474	10Feet	3580	8399	60gm	1283
13	2390P	CRYSTAL SPRINGS GOLF CLUB	WAP970001	WSIN	LAKE B	STORAGE FROM WELL 4 - CORRECTED	16633.13	19	11	479766.73	846108.72	1000ft			630	10Feet			550gm	1353
14	11160W	GREAT GORGE COUNTRY CLUB & GOLF COURSE	WUR020001	WSIN	INTAKE 1	BLACK CREEK	14985.79	19	22	484838.55	857782.92	200ft			400	20Feet			800gm	1400
15	2390P	CRYSTAL SPRINGS GOLF CLUB	WAP970001	WSWL	2200026797	WELL 3	15241.82	19	11	477701.71	846413.47	1000ft	50ft	505ft	650	10Feet	4390	8999	175gm	2425
16	2457P	MOUNTAIN CREEK RESORT INC	WAP030001	WSWL	2200021038	WELL 4	19345.63	19	22	489292.60	860137.66	300ft	167ft	175ft	420	10Feet	1020	129	150gm	2582
17	2457P	MOUNTAIN CREEK RESORT INC	WAP030001	WSWL	2200013297	WELL 1	19811.42	19	22	489755.30	860238.80	500ft	155ft	160ft	460	10Feet	3790	8399	250gm	2212
18	10313W	VERNON WATER CO	WUR940001	WSWL	WELL # UNKNOWN	WELL 1	10155.94	19	22	480002.18	858050.18	1000ft			620	10Feet	4130	8999	5gm	3300
19	5354	HARDYSTON TWP MUA	WAP040001	WSWL	2200041051	WLP-3D	10692.60	19	11	473913.00	849607.00	100ft	12ft	15ft	1278	20Feet				3203

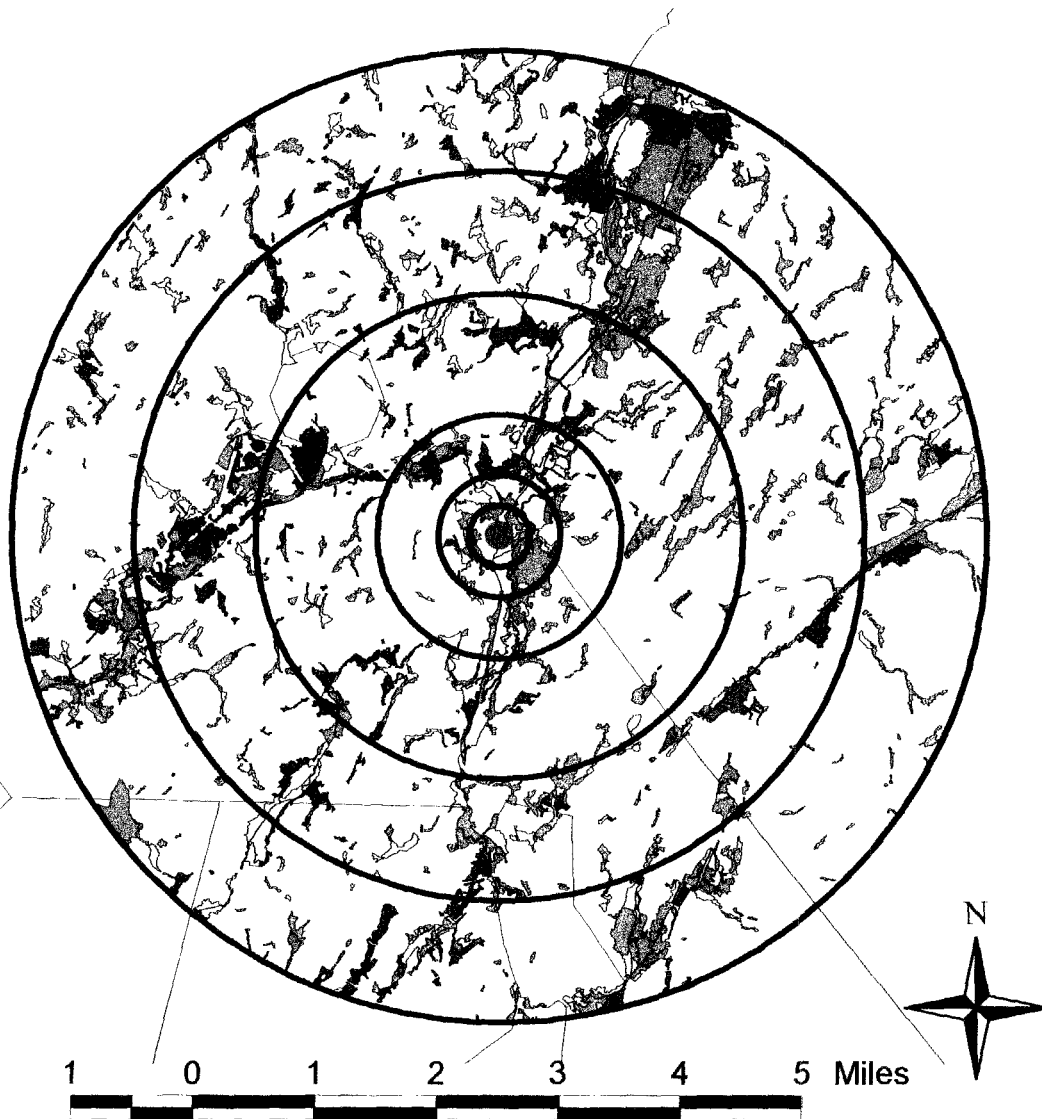
		CRYSTAL SPRINGS																			
20	5354	HARDYSTON TWP MUA CRYSTAL SPRINGS	WAP040001	WSWL	2200024647	INDIAN FIELD 2	17975.43	19	11		464567.00	842392.00	40ft	100ft	215ft	558	20Feet	3780	8399	100gm	3210
21	2536P	WILD TURKEY GOLF CLUB	WAP020001	WSIN	INTAKE 1	NORTH POND (CORRECTED)	12811.21	19	11		474632.99	847613.49	200ft			480	20Feet			1600gm	2955
22	10286W	UNITED WATER VERNON HILLS	WUR950001	WSWL	2200008016	WELL 1	21161.93	19	22		488795.52	869179.37	1000ft		195ft	1100	10Feet	4130	8999	40gm	3542
23	5166	HAMBURG BOROUGH	WAP040001	WSWL	2200013545	WELL 3	14841.57	19	09		472631.00	844942.00	40ft	100ft	300ft	458	20Feet	3790	8399	600gm	3569
24	5166	HAMBURG BOROUGH	WAP040001	WSWL	2200042280	WELL 1A	18186.07	19	09		470820.00	841375.00	40ft	99ft	550ft	540	20Feet	3760	8399	300gm	3724
25	4072PS	BALLYOWEN GOLF CLUB	WAP070001	WSIN	LOWER POND	TRANSFER INTAKE	19158.73	19	11		470167.98	840382.99	20ft			531	20Feet			300gm	3811
26	2457P	MOUNTAIN CREEK RESORT INC	WAP030001	WSIN	INTAKE 3	MT. CREEK LAKE	22641.95	19	22		492125.00	854936.00	300ft			1280	10Feet			9000gm	3923
27	5344	WALLKILL WATER CO	WAP000001	WSWL	2200013928	WELL 2	19624.03	19	09		462550.81	841367.41				520		3580	8399	83gm	3455
28	10286W	UNITED WATER VERNON HILLS	WUR950001	WSWL	2200008426	WELL 4	20291.62	19	22		489940.64	856023.20	1000ft		320ft	1000	10Feet	4130	8999	50gm	4639
29	2390P	CRYSTAL SPRINGS GOLF CLUB	WAP970001	WSIN	LAKE A	STORAGE FROM WELL 3 - CORRECTED	15983.05	19	11		477012.55	845199.50	1000ft			650	10Feet			700gm	4309
30	4072PS	BALLYOWEN GOLF CLUB	WAP070001	WSIN	WALLKILL RIVER- FURNACE POND	ORIGINAL RIVER INTAKE	18898.19	19	11		470895.03	840665.70	20ft			492	20Feet			250gm	4340
31	10313W	VERNON WATER CO	WUR940001	WSWL	2200011415	WELL 11	11293.91	19	22		480689.28	856025.84	1000ft		285ft	620	10Feet			59gm	4388
32	10313W	VERNON WATER CO	WUR940001	WSWL	WELL # UNKNOWN	WELL 6	17758.80	19	22		487647.83	861083.53				620	10Feet	4130	8999	38gm	4971
33	10357W	WALLKILL VALLEY REG HIGH SCHOOL	WUR930001	WSWL	2200019447	WELL 1	14799.33	19	11		466686.01	845107.05	1000ft	66ft	250ft	454	10Feet	3580	8399	60gm	5202
34	4072PS	BALLYOWEN GOLF CLUB	WAP070001	WSWL	2200042463	WELL 2	19921.72	19	11		468315.85	839686.47	20ft	51ft	400ft	600	20Feet	3790	8399	20gm	5265
35	10900W	VERNON TWP PUBLIC SCHOOLS	WUR040001	WSWL	2200006707	1922300/1 (Walnut Ridge)	19780.65	19	22		488505.66	866410.14	500ft	32ft	300ft	580	20Feet	3930	8999	50gm	5067
36	2457P	MOUNTAIN CREEK RESORT INC	WAP030001	WSWL	2200017647	WELL 2	20848.80	19	22		490748.90	858012.30	500ft	130ft	180ft	570	10Feet	4130	8999	0gm	5072
37	10284W	REGENCY AT SUSSEX	WUR950001	WSWL	2200012738	WELL C	10520.19	19	24		465335.77	868991.79	1000ft		400ft	515	10Feet	3390	8199	15gm	5936
38	2415P	AMES RUBBER CORP	WAP990001	WSWL	2200027741	WELL 13B	15043.98	19	09		469974.63	844496.58	100ft	33ft	43ft	409	1Feet	1440	79	10gm	6894
39	10313W	VERNON WATER CO	WUR940001	WSWL	2200011903	WELL 10	13128.44	19	22		480151.73	851269.71	1000ft			620	10Feet	4130	8999	20gm	6784
40	10202W	TALL TIMBERS CAMPGROUND	WUR000001	WSWL	2200013766	WELL 2	12258.00	19	21		479395.47	867360.94	1000ft					3930	8999	50gm	6806

41	2536P	WILD TURKEY GOLF CLUB	WAP020001	WSWL	2200012749	WELL W1-1	13755.50	19	11	474554.22	846576.29	200ft	61ft	350ft	500	20Feet	3760	8399	800gm	7003
42	4072PS	BALLYOWEN GOLF CLUB	WAP070001	WSIN	UPPER POND	PUMPHOUSE INTAKE (CORRECTED)	20346.09	19	11	468437.84	839251.19	20ft			575	20Feet			1600gm	8040
43	4072PS	BALLYOWEN GOLF CLUB	WAP070001	WSWL	2200021498	WELL 4	21012.72	19	11	469353.53	838536.47	20ft	50ft	200ft	576	20Feet	3790	8399	20gm	8042
44	2415P	AMES RUBBER CORP	WAP990001	WSWL	2200027740	WELL 16	14748.53	19	09	470433.87	844799.76	100ft	22ft	37ft	414	1Feet	3790	8399	40gm	8055
45	4072PS	BALLYOWEN GOLF CLUB	WAP070001	WSWL	2200042462	WELL 6	21618.28	19	11	470211.63	837923.78	20ft	213ft	625ft	498	20Feet	3760	8399	0gm	8102
46	SU008R	EA FARMS	AGR000001	WSWL	4200038044	WELL 2	26389.82	19	24	444391.91	866089.63	500ft					3390	8199	12gm	8301
47	2415P	AMES RUBBER CORP	WAP990001	WSWL	2200023088	WELL 8B	15147.41	19	09	470204.02	844395.17	100ft	31ft	41ft	409.6	1Feet	1440	79	10gm	7925
48	4072PS	BALLYOWEN GOLF CLUB	WAP070001	WSWL	2200042527	WELL 5	21031.17	19	11	470196.87	838510.75	20ft	59ft	500ft	494	20Feet	3790	8399	250gm	7814
49	5344	WALLKILL WATER CO	WAP000001	WSWL	2200008741	WELL 1	21565.79	19	09	462395.31	839343.61				533		3580	8399	26gm	8517
50	10135W	AMES RUBBER-WANTAGE PLANT	WUR910001	WSWL	2200030732	WELL PW3	983.18	19	24	470064.01	858563.30	1000ft	150ft	305ft			3930	8999	225gm	8678
51	2097P	LEGENDS RESORT	WAP010001	WSWL	2200013706	WELL 3	12702.49	19	22	481529.56	854305.05	500ft			425		3580	8399	450gm	9257
52	10313W	VERNON WATER CO	WUR940001	WSWL	2200009377	WELL 5 1-2	10529.24	19	22	480231.13	857240.47	1000ft	20ft	198ft	620	10Feet	4130	8999	10gm	9801
53	5344	WALLKILL WATER CO	WAP000001	WSWL	2200024645	WELL 3	21215.22	19	09	463466.46	839342.30		97ft	253ft	522		3580	8399	124gm	9707
54	5354	HARDYSTON TWP MUA CRYSTAL SPRINGS	WAP040001	WSWL	2200025808	INDIAN FIELD 3	17028.45	19	11	464865.00	843291.00	40ft	71ft	328ft	558	20Feet	3780	8399	50gm	9195
55	10816W	SIMMONS WATER CO INC	WUR940001	WSWL	2200009738	WELL 2	17150.92	19	24	462057.10	874764.16	6000ft	22ft	100ft	540	20Feet	3390	8199	50gm	10023
56	2457P	MOUNTAIN CREEK RESORT INC	WAP030001	WSWL	2200010850	WELL 6	14493.84	19	22	483621.48	854710.32	100ft	38ft	185ft	407	10Feet	1020	129	20gm	10733
57	5354	HARDYSTON TWP MUA CRYSTAL SPRINGS	WAP040001	WSWL	2200026064	INDIAN FIELD 4	17274.40	19	11	464847.00	843039.00	40ft	128ft	133ft	560	20Feet	3780	8399	115gm	10882
58	10900W	VERNON TWP PUBLIC SCHOOLS	WUR040001	WSWL	2200018793	1922318/3 (Glen Meadow)	21607.22	19	22	489895.30	867865.43	500ft	239ft	239ft	590	20Feet	3930	8999	50gm	10905
59	10135W	AMES RUBBER-WANTAGE PLANT	WUR910001	WSWL	2200005028	WELL PW-1	1126.96	19	24	468841.60	859374.06	1000ft	28ft	96ft			3930	8999	10gm	10547
60	10900W	VERNON TWP PUBLIC SCHOOLS	WUR040001	WSWL	2200023422	1922356/6 (Cedar Mountain)	22395.84	19	22	490273.55	868962.78	500ft	127ft	374ft	560	20Feet	3930	8999	50gm	11704
61	5344	WALLKILL WATER CO	WAP000001	WSWL	2200028679	WELL 4 3 4	20067.78	19	09	461020.99	841571.74	1000ft	91ft	250ft	550		3580	8399	0gm	16134
62	10313W	VERNON WATER CO	WUR940001	WSWL	2200018333	WELL 12 1 3	12077.09	19	22	480688.33	854001.84	1000ft	100ft	400ft	498	10Feet	4130	8999	12gm	14796
63	5354	HARDYSTON TWP MUA	WAP040001	WSWL	2200027192	CRYSTAL	13476.71	19	11	475431.00	847226.00	40ft	157ft	300ft	540	20Feet	3790	8399	350gm	11861

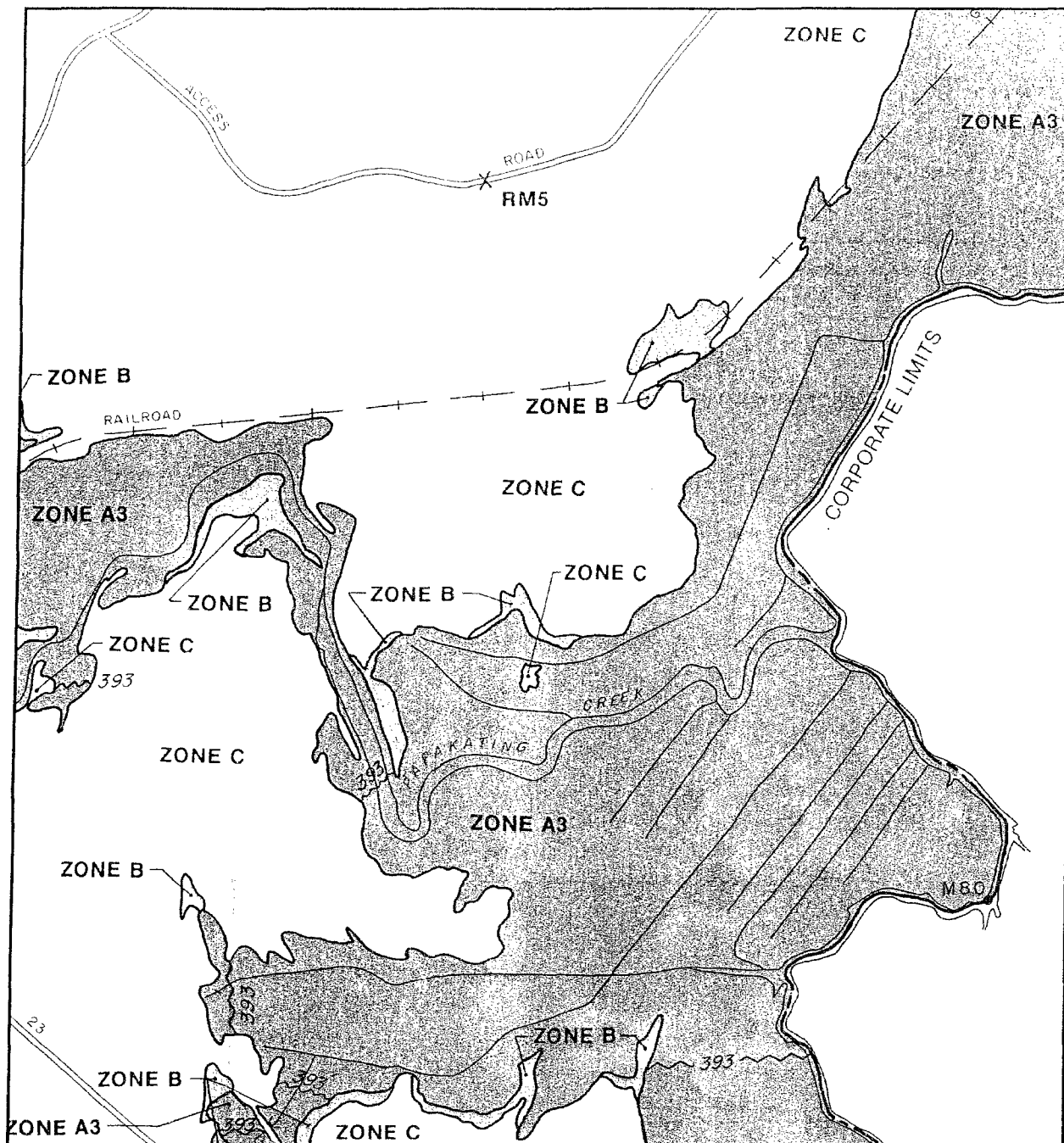
		CRYSTAL SPRINGS				SPRINGS 2															
64	10202W	FALL TIMBERS CAMPGROUND	WUR000001	WSWL	2200038083	WELL 4	16776.93	19	21		482300.91	870901.59	500ft	300ft				3930	8999	15gm	14815
65	10816W	SIMMONS WATER CO INC	WUR940001	WSWL	2200004408	WELL 1	16526.04	19	24		462438.47	874257.68	6000ft	85ft	148ft	540	20Feet	3390	8199	28gm	12041
66	10313W	VERNON WATER CO	WUR940001	WSIN	OAK HILLS	INTAKE 1	17397.25	19	22		487265.66	861286.00				620	10Feet			22gm	13727
67	2415P	AMES RUBBER CORP	WAP990001	WSWL	2200027737	WELL 13A	15043.98	19	09		469974.63	844496.58	100ft	55ft	65ft	408.8	1Feet	3790	8399	120gm	13841
68	5354	HARDYSTON TWP MUA CRYSTAL SPRINGS	WAP040001	WSWL	2200040474	CC-1	12069.09	19	11		476524.00	849415.00	100ft	166ft	451ft	540	20Feet	3790	8399	400gm	16453
69	5370	UNITED WATER NJ VERNON VALLEY	WAP070001	WSWL	2200024845	WELL 5	14511.32	19	22		483504.00	854341.00	150ft	115ft	125ft	439	10Feet	3790	8399	600gm	12462
70	2457P	MOUNTAIN CREEK RESORT INC	WAP030001	WSIN	INTAKE 4	GOLF COURSE, POND 3	17119.95	19	22		485089.80	851536.40	300ft			940	10Feet			300gm	15452
71	4072PS	BALLYOWEN GOLF CLUB	WAP070001	WSWL	2200038344	WELL 3	20484.80	19	11		468988.54	839078.61	20ft			589	20Feet				15460
72	2390P	CRYSTAL SPRINGS GOLF CLUB	WAP970001	WSWL	2200028973	WELL 4	17020.35	19	11		481373.36	846917.54	1000ft	50ft	143ft	630	10Feet	4390	8999	100gm	15475
73	10286W	UNITED WATER VERNON HILLS	WUR950001	WSWL	WELL # UNKNOWN	WELL 5	19761.71	19	22		489558.45	857035.24			172ft	1000	10Feet	4130	8999	25gm	17046
74	10202W	FALL TIMBERS CAMPGROUND	WUR000001	WSWL	2200016425	WELL 1	19929.27	19	21		488795.11	866042.16	1000ft					3930	8999	6gm	14138
75	4072PS	BALLYOWEN GOLF CLUB	WAP070001	WSIN	WALL KILL RIVER- FURNACE POND	NEW RIVER INTAKE	18978.28	19	11		470879.66	840584.75	20ft			492	5Feet			250gm	15740
76	10313W	VERNON WATER CO	WUR940001	WSWL	2200008456	WELL 4	11248.21	19	22		480765.93	856430.61	1000ft		147ft	620	10Feet	4130	8999	30gm	12783
77	10313W	VERNON WATER CO	WUR940001	WSWL	2200010536	WELL 8	16621.14	19	22		486577.31	859565.75	1000ft	50ft	287ft	620	10Feet	4130	8999	11gm	12784
78	2415P	AMES RUBBER CORP	WAP990001	WSWL	2200027746	WELL 18B	14841.61	19	09		469898.32	844699.05	100ft	45ft	65ft	415	1Feet	1440	79	10gm	15792
79	2097P	LEGENDS RESORT	WAP010001	WSWL	2200009938	WELL 1	8206.82	19	22		477631.35	856634.70	500ft	48ft	58ft	425		1020	129	125gm	12928
80	11160W	GREAT GORGE COUNTRY CLUB & GOLF COURSE	WUR020001	WSIN	INTAKE 2	BLACK CREEK	14976.74				484833.47	857817.42	200ft			400	20Feet			800gm	11528
81	SU008R	EA FARMS	AGR000001	WSWL	2200021335	WELL 1	2577.72	19	24		467846.46	858059.44	500ft	54ft	75ft			3390	8199	100gm	12939
82	2457P	MOUNTAIN CREEK RESORT INC	WAP030001	WSWL	4200038692	WELL 5	14849.69	19	22		483725.31	853979.57	100ft		213ft	415	10Feet	1020	129	5gm	14481
83	2415P	AMES RUBBER CORP	WAP990001	WSWL	2200030791	19B	14942.78	19	09		469974.72	844597.78	100ft	12ft	62ft	415	1Feet	1440	79	10gm	15965
84	2457P	MOUNTAIN CREEK	WAP030001	WSIN	INTAKE 2	STEWART	21649.19	19	22		490901.60	854065.40	300ft			1285	10Feet			6000gm	17625

		RESORT INC			LAKE															
85	2457P	MOUNTAIN CREEK RESORT INC	WAP030001	WSIN	INTAKE 5	RECOVERY POND	20130.80	19	22	490072.42	858774.85	300ft			1100	10Feet			500gm	17717
85	2457P	MOUNTAIN CREEK RESORT INC	WAP030001	WSIN	INTAKE 5	RECOVERY POND	20130.80	19	22	490072.42	858774.85	300ft			1100	10Feet			600gm	17717
86	2457P	MOUNTAIN CREEK RESORT INC	WAP030001	WSIN	INTAKE 1	GREAT GORGE LK (CORRECTED)	19996.48	19	22	486695.00	848601.10	300ft			1300	10Feet			11.04TM	17874
87	5354	HARDYSTON TWP MUA CRYSTAL SPRINGS	WAP040001	WSWL	2200041052	WLP-3S	10860.69	19	11	474018.00	849468.00	100ft	3ft	5ft	1278	20Feet				17263
88	5354	HARDYSTON TWP MUA CRYSTAL SPRINGS	WAP040001	WSWL	2200027194	CRYSTAL SPRINGS 1	14600.40	19	11	473950.00	845497.00	40ft	130ft	455ft	530	20Feet	3790	8399	350gm	17313
89	10286W	UNITED WATER VERNON HILLS	WUR950001	WSWL	2200008425	WELL 3	12026.56	19	22	480006.23	866146.21	1000ft		192ft	700	10Feet	4130	8999	30gm	17357
90	10900W	VERNON TWP PUBLIC SCHOOLS	WUR040001	WSWL	2200008868	1922314/2 (Lounsberry Hollow)	25250.96	19	22	492815.50	870267.30	500ft	108ft	190ft	500	20Feet	3930	8999	40gm	17399
91	10313W	VERNON WATER CO	WUR940001	WSWL	WELL # UNKNOWN	WELL 3 1-3	11938.19	19	22	481300.85	855823.16	1000ft			620	10Feet	4130	8999	22gm	17475
92	10202W	TALL TIMBERS CAMPGROUND	WUR000001	WSWL	2200017491	WELL 3	12258.00	19	21	479395.47	867360.94						3930	8999	75gm	17533
93	SU008R	EA FARMS	AGR000001	WSWL	2200025608	WELL 3	25102.68	19	24	444917.52	861332.14	500ft	50ft	450ft			3390	8199	12gm	17536

Map of Wetlands
Ames Rubber
Wantage Twp, Sussex County
Lat: 41° 11' 35.00" , Long: -74° 34' 50.00"



Ring	1	(0.00- 0.25)	has Wetlands Acres:	69
Ring	2	(0.25- 0.50)	has Wetlands Acres:	231
Ring	3	(0.50- 1.00)	has Wetlands Acres:	402
Ring	4	(1.00- 2.00)	has Wetlands Acres:	1123
Ring	5	(2.00- 3.00)	has Wetlands Acres:	1798
Ring	6	(3.00- 4.00)	has Wetlands Acres:	2313



APPROXIMATE SCALE
800 0 800 FEET

NATIONAL FLOOD INSURANCE PROGRAM

FIRM FLOOD INSURANCE RATE MAP

TOWNSHIP OF
WANTAGE,
NEW JERSEY
SUSSEX COUNTY

PANEL 30 OF 40

(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER

340562 0030 A

EFFECTIVE DATE:

FEBRUARY 15, 1984



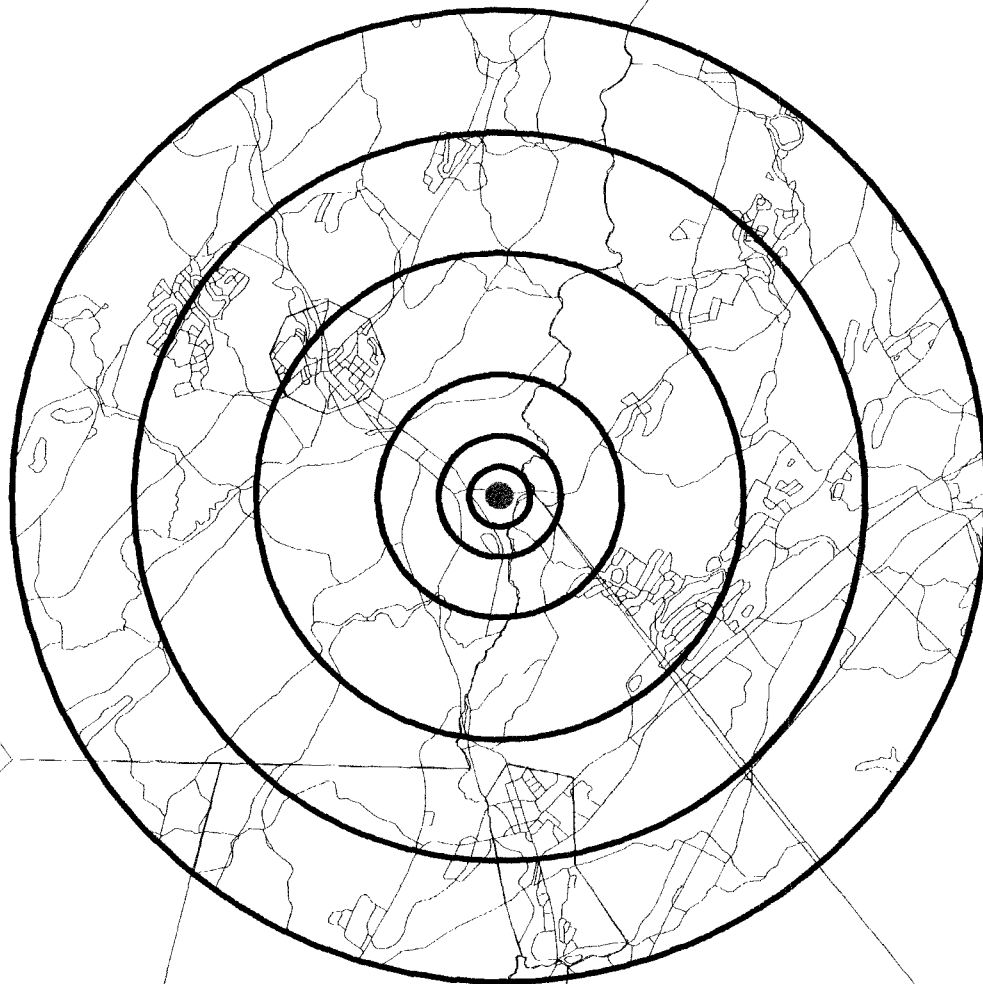
Federal Emergency Management Agency

This is an official copy of a portion
was extracted using F-MIT On-Lin
or amendments which may have
title block. For the latest product
Program flood maps check the FI

AMES RUBBER CORPORATION
1440 ROUTE 565
WANTAGE, NEW JERSEY

FLOOD INSURANCE MAP
MAP 7

Map of Population
Ames Rubber
Wantage Twp, Sussex County
Lat: 41° 11' 35.00" , Long: -74° 34' 50.00"



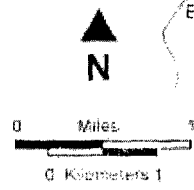
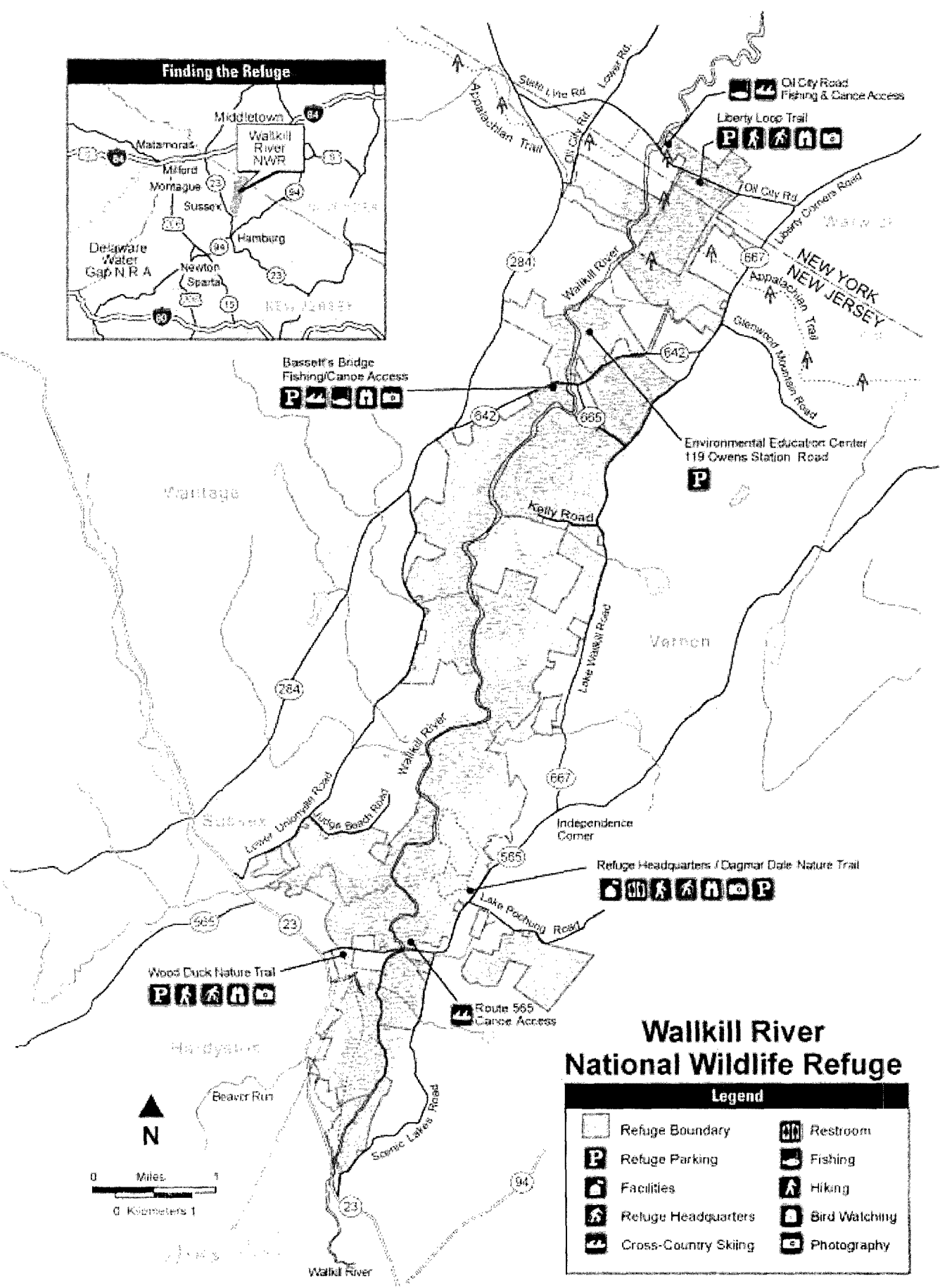
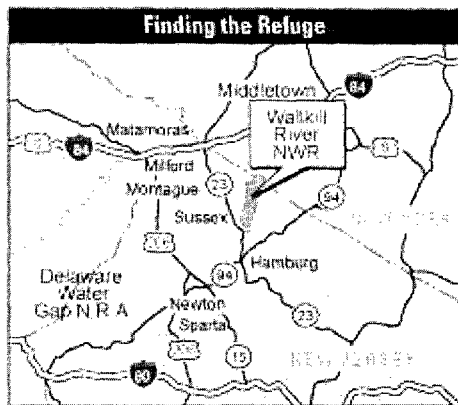
Ring	1	(0.00- 0.25)	has Population:	1
Ring	2	(0.25- 0.50)	has Population:	41
Ring	3	(0.50- 1.00)	has Population:	411
Ring	4	(1.00- 2.00)	has Population:	5251
Ring	5	(2.00- 3.00)	has Population:	6747
Ring	6	(3.00- 4.00)	has Population:	6149

**Ames Rubber
Site Reassessment**



AMES RUBBER CORPORATION
1440 ROUTE 565
WANTAGE, NEW JERSEY

AERIAL MAP
MAP 9



Walkill River National Wildlife Refuge

Legend	
	Refuge Boundary
	Refuge Parking
	Facilities
	Refuge Headquarters
	Cross-Country Skiing
	Restroom
	Fishing
	Hiking
	Bird Watching
	Photography

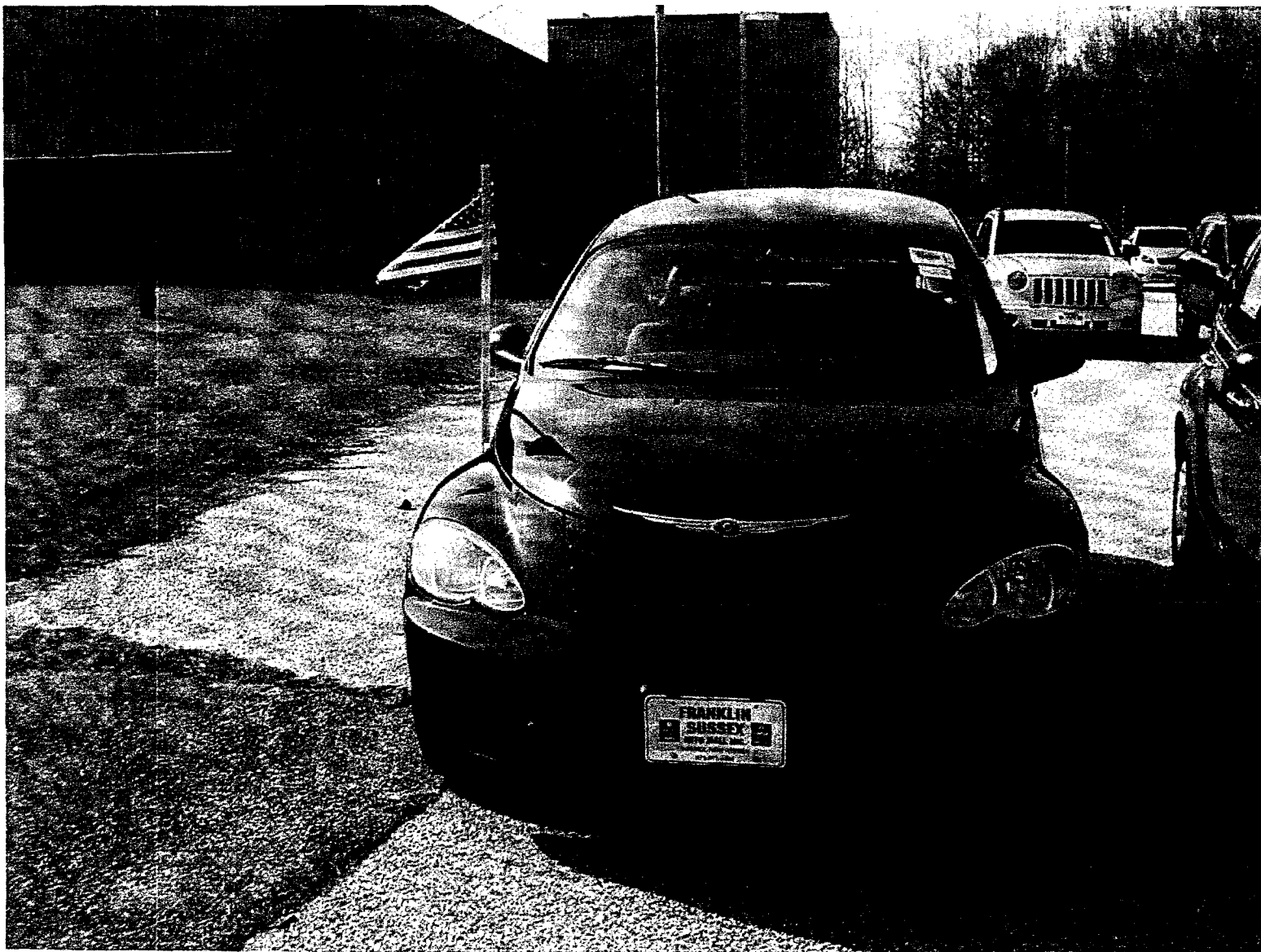


PHOTOGRAPHS

**AMES RUBBER CORPORATION
PHOTOGRAPH LOG**

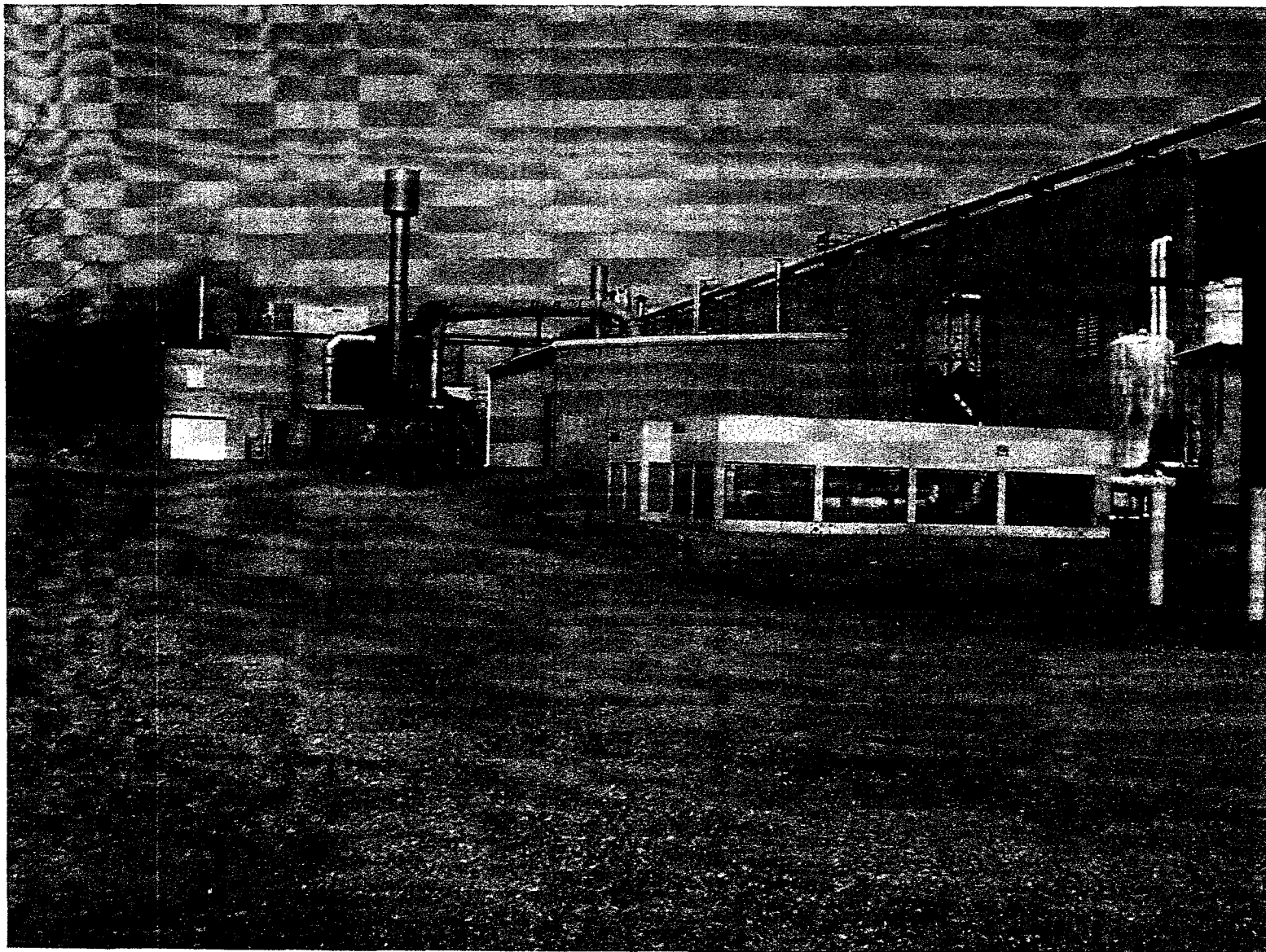
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NUMBER**

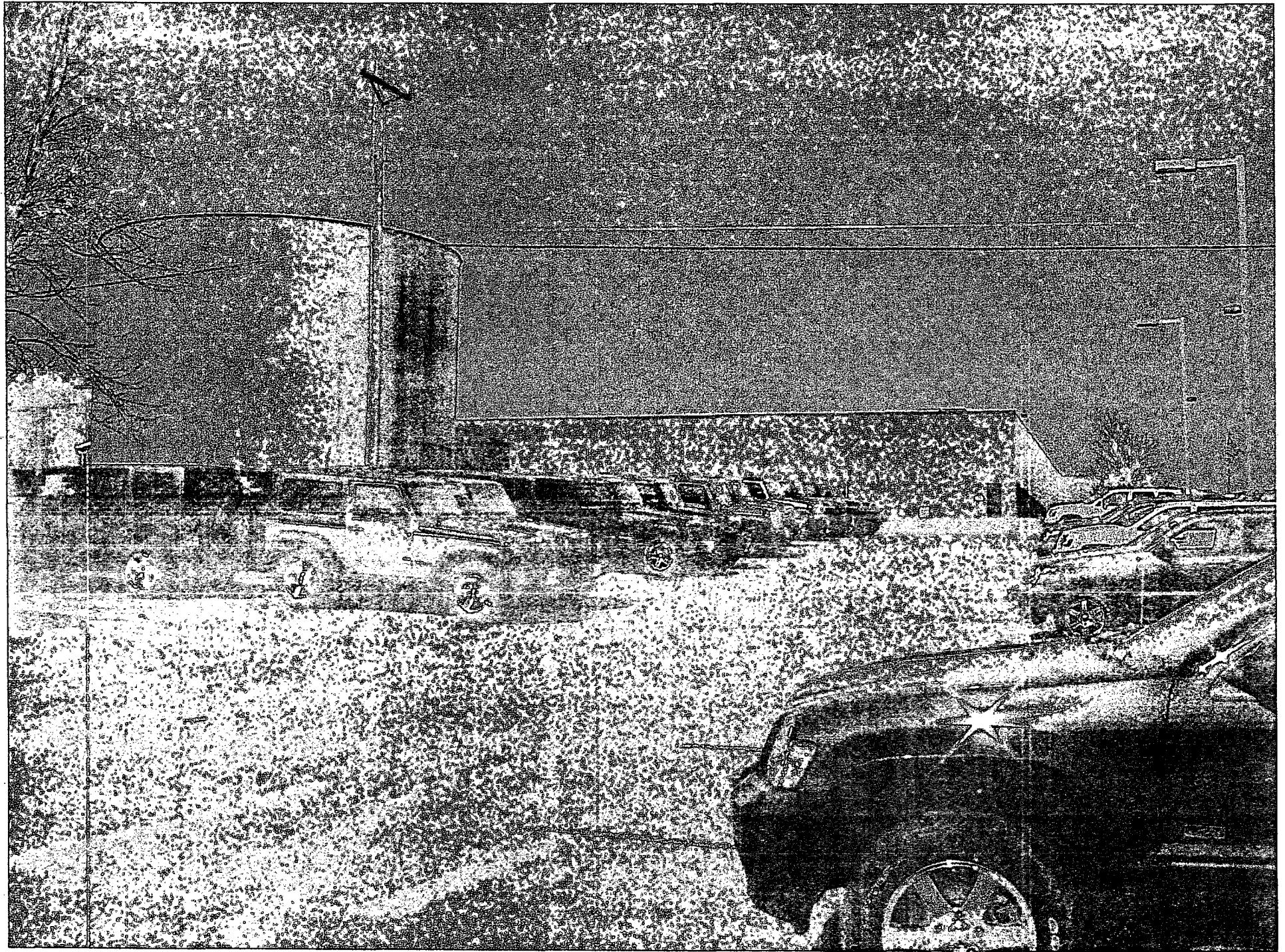
- | | |
|-----------|---|
| #1 | View of parking lot on west side showing new vehicles. |
| #2 | View of hazardous waste drum storage area. |
| #3 | View facing south east of Quantum Heating and Air Conditioning
(Building #3) |
| #4 | View facing west in back of Building # 2 |
| #5 | View facing west on eastern parking lot showing stored new vehicles. |
| #6 | View of front of Building #2 with for sale sign. |

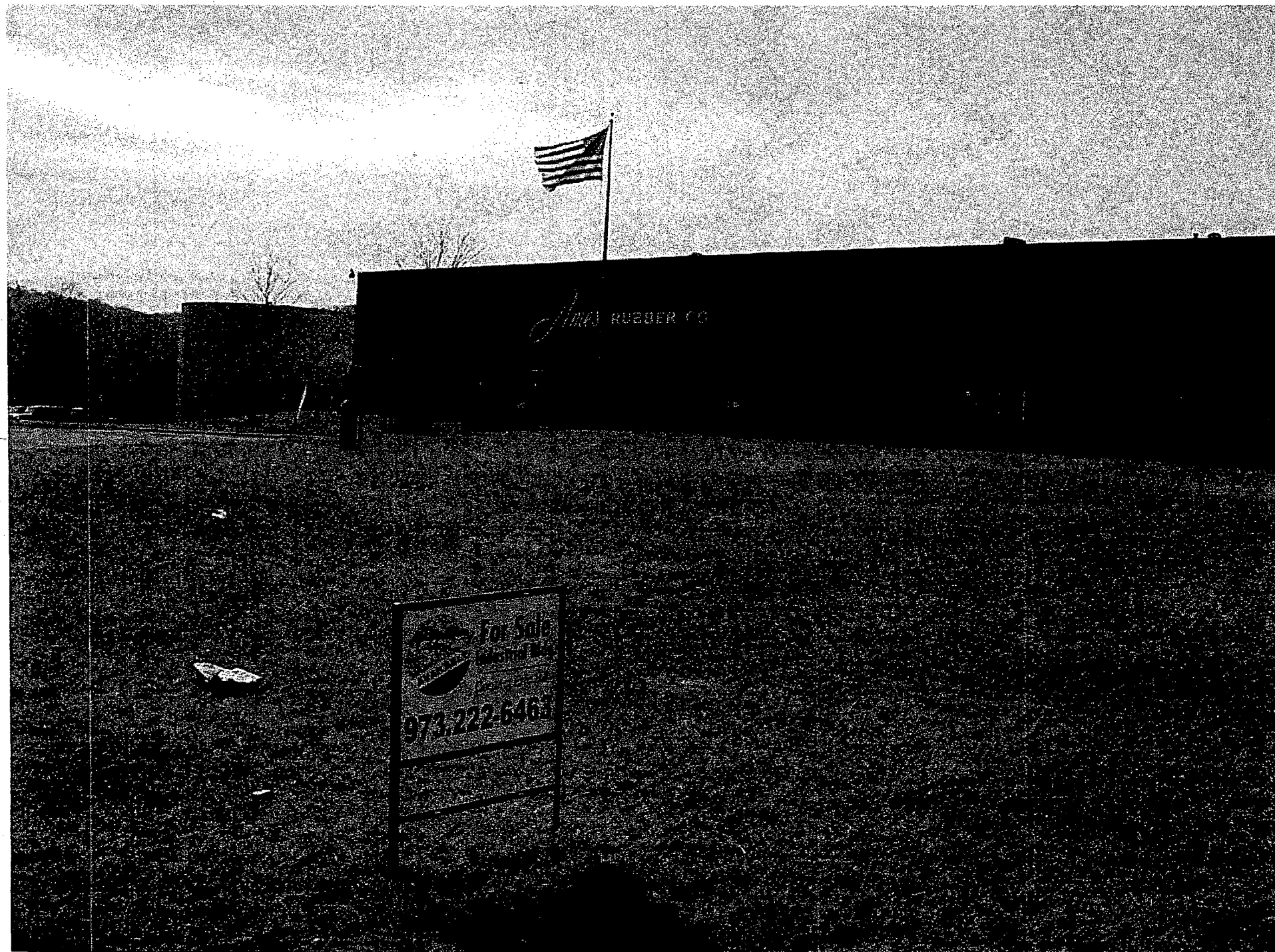












ATTACHMENT A



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> AMES RUBBER CORP. WANTAGE PLANT

Superfund Site Information

AMES RUBBER CORP. WANTAGE PLANT

Site Information

[Site Info](#) | [Aliases](#) | [Operable Units](#) | [Contacts](#)
[Actions](#) | [Contaminants](#) | [Site-Specific Documents](#)

Site Name: AMES RUBBER CORP. WANTAGE PLANT

Street: ROUTE 565

City / State / ZIP: WANTAGE, NJ 07461

NPL Status: Not on the NPL

Non-NPL Status: Other Cleanup Activity: State-Lead Cleanup

ERS Exclusion: An Eligible Response Site (ERS) Exclusion decision has been made at this site.

EPA ID: NJD000818518

EPA Region: 02

County: SUSSEX

Federal Facility Flag: Not a Federal Facility

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ATTACHMENT B

Bureau Chief Approval _____ Date 11/14/95
 Section Chief Approval _____ Date 11/14/95
 Supervisor Approval [Signature] Date 11/14/95
 Case Reviewer Linda Range NFA Date 1-5-95

1. Facility Aines Rubber Corp
 2. Municipality Wantage County SUSSEX
 3. Incident # _____
 4. TMS #'s 094-1666
 5. UST # 0030197 JobCode _____

6. Tank Information and Sampling Results:

a. (Check One) ☒ Removed ☐ Abandoned In Place Date: _____
 Quantity 1 Size 10,000 gallons Condition _____
 Piping length 30' Condition _____
 Contents (Check One) ☐ Leaded Gasoline ☐ Unleaded Gasoline ☐ Kerosene ☐ Jet Fuel
☐ Diesel ☒ #2 Fuel Oil ☐ #4 or #6 Fuel Oil ☐ Motor Oil ☐ Waste Oil ☐ Other
 Parameters: ☒ TPHC ☐ VO+10 ☐ BN+15 ☐ PAH ☐ Lead ☐ PCB ☐ PPM ☐ Naphthalene

b. (Check One) ☐ Removed ☐ Abandoned In Place Date: _____
 Quantity _____ Size _____ gallons Condition _____
 Piping length _____ Condition _____
 Contents (Check One) ☐ Leaded Gasoline ☐ Unleaded Gasoline ☐ Kerosene ☐ Jet Fuel
☐ Diesel ☐ #2 Fuel Oil ☐ #4 or #6 Fuel Oil ☐ Motor Oil ☐ Waste Oil ☐ Other
 Parameters: ☐ TPHC ☐ VO+10 ☐ BN+15 ☐ PAH ☐ Lead ☐ PCB ☐ PPM ☐ Naphthalene

Contaminants (ppm)	Highest Concentration	Average Concentration	Most Stringent Criteria
<u>TPH</u>	<u>300 ppm</u>		<u>1000 ppm</u>

	Tank Letter	Results
7. Was there evidence of a release (Odors, Visual, PID/FID readings)?	Y	<u>N</u>
8. Was the Hotline called?	Y	<u>N</u>
9. Was there overexcavation?	Y	<u>N</u>
10. Was the soil greater than 15% Silt and Clay?	Y	<u>N</u> N/A
11. Was Ground Water encountered in the excavation?	Y	<u>N</u>
12. Is a monitoring well required?	Y	<u>N</u>
13. Were dispensers removed?	Y	<u>N</u> N/A
14. Was sampling frequency acceptable?	Y	<u>N</u>
15. Was sampling location acceptable?	Y	<u>N</u>
16. Was overburden soil placed back in the excavation?	Y	<u>N</u>
17. Was soil disposed of offsite?	Y	<u>N</u> Waste Type _____
18. Were tank contents (Product/Sludges) disposed offsite?	Y	<u>N</u> Waste Type <u>X732</u>
19. Were laboratory holding times acceptable?	Y	<u>N</u>
20. Was SAS completed with appropriate signatures of Certified Personnel?	Y	<u>N</u>
21. Were all fees Paid?	Y	<u>N</u> Fee owed _____
22. Comments:		



State of New Jersey

Christine Todd Whitman
Governor

Department of Environmental Protection

Robert C. Shinn, Jr.
Commissioner

Bureau of Field Operations
Underground Storage Tanks Unit
CN-028

401 East State Street
Trenton, NJ 08625

JAN 11 1995

Ames Rubber Corporation
23-47 Ames Boulevard
Hamburg, NJ 07410
Att: Patrick Fitzgibbons

Re: Ames Rubber Corporation
RR 5 Route 565, Wantage, Sussex County
Closure #C94-1666
UST #0030197

Dear Mr. Fitzgibbons,

Pursuant to the authority vested in the Commissioner of the New Jersey Department of Environmental Protection (Department) and duly delegated to the Bureau Chief of the Bureau of Field Operations pursuant to the Underground Storage of Hazardous Substances Act, N.J.S.A. 58:10A-21 et seq. and implementing regulations, N.J.A.C. 7:14B et seq., the referenced No Further Action (NFA) proposal for the below referenced area(s) of concern (AOCs) is hereby **approved**. This closure consisted of the removal of one 10,000 gallon #2 fuel UST and all associated piping. The results of the soil analysis indicated contaminant levels were below the cleanup criteria developed for this site. Pursuant to N.J.A.C. 7:26E, a ground water investigation was not required.

This approval is based on the information provided to the Department concerning the satisfactory completion of the Site Investigation Report received on October 20, 1994 in accordance with the Technical Requirements for Site Remediation (N.J.A.C. 7:26E).

This approval shall be limited only to the above referenced AOC(s), the condition of such areas as of the date of this letter, and shall not be construed to address any other areas of the site. This NFA Approval Letter shall not restrict or prohibit the Department or any other agency from taking regulatory action under any other statute, rule or regulation. By issuing this NFA Approval Letter, the Department reserves its right to pursue any penalties allowable under the law for violations pursuant to the Underground Storage of Hazardous Substances Act, N.J.S.A. 58:10A-21 et seq. and implementing regulations, N.J.A.C. 7:14B et seq., or any other statute, rule or regulation.

Sincerely,

Mike Tompkins, Chief
Bureau of Field Operations

c: Linda Range, Case Manager

ATTACHMENT C



Excellence
Through Total Quality

Ames Rubber Corporation

Ames Boulevard
Hamburg, New Jersey 07419

Tel: 201 208-3200
Fax: 201 827-8883

FACIMILE COVER MEMORANDUM

DATE:

April 24, 2008

PAGES:

3

ATTENTION:

RAY POGWIST

COMPANY:

NJDEP

FAX:

609-584-4298

FROM:

CHRIS DEL ROSARIO

MESSAGE:

RAY:

PER OUR TELEPHONE CONVERSATION YESTERDAY,
HEREWITH COPY OF MOA DATED 12-8-95.

CHRIS DEL ROSARIO

PLEASE CONTACT US BY RETURN PHONE CALL SHOULD YOU NOT
RECEIVE THIS MESSAGE IN ITS ENTIRETY (973) 827-9101





State of New Jersey

Christine Todd Whitman
Governor

Department of Environmental Protection

Robert C. Shinn, Jr.
Commissioner

IN THE MATTER OF
THE WANTAGE FACILITY SITE
AND
AMES RUBBER CORPORATION

MEMORANDUM
OF
AGREEMENT

This Memorandum of Agreement is entered into pursuant to the authority vested in the Commissioner of the New Jersey Department of Environmental Protection (hereinafter "the Department" or "NJDEP") by N.J.S.A. 13:1D-1 et seq. and N.J.S.A. 58:10B et seq. and the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq. and the Spill Compensation and Control Act, N.J.S.A. 58:10-23.11 et seq. and duly delegated to the Section Chief, Division of Responsible Party Site Remediation, Case Assignment Section pursuant to N.J.S.A. 13:1B-4.

FINDINGS

1. The property that is the subject of this Memorandum of Agreement is owned by Ames Rubber Corporation, and is located on County Route 565 and is designated as Block 7, Lots 7.03 and 8 on the tax maps of the Township of Wantage, Sussex County, New Jersey (hereinafter the "Site").

2. Ames Rubber Corporation, with principal offices at 23-47 Ames Boulevard, Borough of Hamburg, New Jersey 07419, is the party executing this Memorandum of Agreement.

3. The intent of this Memorandum of Agreement is to allow Ames Rubber Corporation to conduct any of the remedial activities outlined herein with oversight from the Department. Ames Rubber Corporation has indicated to the Department, that it wishes to conduct the following activities at the Site with the Department's oversight:

a. Remedial Action-continued remediation of groundwater.

4. By entering into this Memorandum of Agreement, Ames Rubber Corporation does not admit to any fact, fault or liability under any statute or regulation for conditions which existed before, during, or after Ames Rubber Corporation's execution of this Memorandum of Agreement nor shall it be construed as a waiver of any right or defense Ames Rubber Corporation may have with regard to the Site.

AGREEMENT**I. Remediation**

5. Ames Rubber Corporation agrees to submit the following documents and the Department agrees to review and comment on documents submitted.

- ~~a. Remedial Action Workplan~~
- b. Remedial Action Report

RAWP submitted 2/24/94

pk
2/29/95

6. Within thirty (30) calendar days after the Department's receipt of any submission pursuant to this Memorandum of Agreement, the Department will inform Ames Rubber Corporation in writing of any administrative deficiencies in the submission, pursuant to N.J.A.C. 7:26E, that will prevent the Department from conducting its review. When the Department determines that the submission is administratively complete, the Department will notify Ames Rubber Corporation in writing of the timeframe required for the Department to complete the review. This review will include a determination by the Department whether or not all remedial activities have been carried out consistent with applicable rules, standards, and guidelines.

7. Within seven (7) calendar days after the effective date of this Memorandum of Agreement, Ames Rubber Corporation will submit to the Department: a) the name, address and telephone number of the individual who will be the contact for Ames Rubber Corporation regarding technical matters concerning this Memorandum of Agreement and b) the name and address of the designated agent for Ames Rubber Corporation for the purpose of service for all matters concerning this Memorandum of Agreement.

8. Ames Rubber Corporation may terminate this Memorandum of Agreement if Ames Rubber Corporation determines that it is no longer feasible or desirable to continue with this Memorandum of Agreement, when Ames Rubber Corporation:

- a. Submits full payment to the Department for any Department oversight costs the Department incurred pursuant to this Memorandum of Agreement which Ames Rubber Corporation has not paid;
- b. Notifies the Department in writing of its intentions to terminate this Memorandum of Agreement;
- c. Submits all data generated pursuant to this Memorandum of Agreement; and
- d. Ensures that no environmental hazards exist at the Site as a result of Ames Rubber Corporation's actions pursuant to this Memorandum of Agreement.

- e. The Department will cease review of any submittals under this memorandum of agreement on the date it receives the notice of intent to terminate described in Paragraph 8 (b) above; and no oversight costs will accrue after the Department has determined that the signatory is in full compliance with Paragraph 8. The Department will then prepare a summary of its costs and provide it to Ames Rubber Corporation. The date of termination of this agreement is the date of the Department's receipt of both the full unconditioned payment of all of the Department's oversight costs and all data required by Paragraph 8.c. above.

II. Project Coordination

9. Unless otherwise directed by the Department, Ames Rubber Corporation shall submit two (2) copies of all documents required by this Memorandum of Agreement to the person identified below, who shall be the Department's contact for Ames Rubber Corporation for all matters concerning this Memorandum of Agreement.

New Jersey Department of Environmental Protection
Division of Responsible Party Site Remediation
Bureau of Field Operations - Northern
1259 Route 46
Parsippany, New Jersey 07054

Attention: Yacoub Yacoub, Section Chief

III. Financial Obligations

10. Upon receipt of a summary of the Department's costs incurred in connection with its oversight functions of this Memorandum of Agreement, Ames Rubber Corporation shall submit to the Department a cashier's or certified check payable to the "Treasurer, State of New Jersey" with NJDEP Form 062A for the full amount of the Department's oversight costs. Ames Rubber Corporation cannot be released from its obligations under this Memorandum of Agreement, until all oversight costs, for work performed by the Department, are paid.

11. Beginning three hundred sixty-five (365) calendar days after the effective date of this Memorandum of Agreement, and annually thereafter on that same calendar day, Ames Rubber Corporation shall submit to the Department a detailed summary of all monies spent to date pursuant to this Memorandum of Agreement, the estimated cost of all future expenditures associated with this Memorandum of Agreement (including any operation and maintenance costs), and the reason for any changes from the previous cost review Ames Rubber Corporation submitted.

IV. Reservation of Rights

12. The Department reserves the right to unilaterally terminate this Memorandum of Agreement in the event that Ames Rubber Corporation violates any terms or fails to meet the obligations of this Memorandum of Agreement or in the event that the Site becomes a high priority for the Department.

13. Nothing herein, including any document the Department issues as agreed to above, shall be interpreted to constitute a release or waiver of liability for any of the conditions which existed before, during or after the Department's execution of this Memorandum of Agreement.

V. General Conditions

14. Ames Rubber Corporation shall, in addition to any other obligation required by law, notify the Department contact immediately upon knowledge of any condition posing an immediate threat to human health and/or the environment.

15. Ames Rubber Corporation shall perform all work conducted pursuant to this Memorandum of Agreement in accordance with N.J.A.C. 7:26E and prevailing professional standards then prevailing.

16. Ames Rubber Corporation shall conform all actions required by this Memorandum of Agreement with all applicable federal, State and local laws and regulations.

17. Nothing in this Memorandum of Agreement shall be deemed to impose on Ames Rubber Corporation any additional liabilities or obligations, other than those specifically stated herein. Nothing shall relieve Ames Rubber Corporation from complying with all other applicable laws and regulations.

18. Ames Rubber Corporation shall preserve all potential evidentiary documentation found at the Site, which may provide a -- nexus between the contaminated site and any responsible party or lead to the discovery of other areas of concern including without limitation, documents, labels, drums, bottles, boxes or other containers, and/or other physical materials that could lead to the establishment of the identity of any person which generated, treated, transported, stored or disposed of contaminants at the Site, until written approval is received from the Department to do otherwise.

19. Upon receipt of a written request from the Department, Ames Rubber Corporation shall submit to the Department all data and information concerning contamination at the Site, including technical records and contractual documents, and raw sampling and monitoring data, whether or not such data and information was developed pursuant to this Memorandum of Agreement. If Ames Rubber Corporation believes any such data or information is protected by

a privilege it will retain the data and information and notify the Department of the nature of the document and the privilege claimed. Ames Rubber Corporation may request that the Department keep confidential information contained in a submission to the Department pursuant to N.J.A.C. 7:14A-11.

20. The Department will issue a no further action statement when the Department has determined that the signatory has conducted the agreed upon remedial activities pursuant to this Memorandum of Agreement and the remedial activities are in accordance with all Department requirements.

21. This Memorandum of Agreement shall be governed and interpreted under the laws of the State of New Jersey.

22. This Memorandum of Agreement shall be binding, jointly and severally, on each party, its successors and assignees subject to the right of termination above. No change in the ownership or corporate or business status of any party, or of the facility or site shall alter any signatories's responsibilities under this Memorandum of Agreement.

23. This Memorandum of Agreement shall become effective upon execution hereof by all parties.

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

Date:

12/8/95

BY:

Mark J. Pedersen
Section Chief
DRPSR, Case Assignment Section

Ames Rubber Corporation

Date:

11-29-95

BY:

Signature

Lyle C. Ryder

Print Full Name Signed Above

Vice President - Technology
Title

ATTACHMENT D

FINAL
REMEDIAL ACTION PLAN

for

**Ames Rubber Corporation
Wantage Facility
Wantage Township, New Jersey**

by

**R. E. Wright Associates, Inc.
3240 Schoolhouse Road
Middletown, Pennsylvania 17057**

REWAI Project 92406

November 1992

r.e. wright associates, inc.

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1.0 INTRODUCTION

As a result of a 1984 in-house environmental assessment, elevated concentrations of volatile organic compounds (VOCs) were identified from both on-site and off-site groundwater wells. At this time, local and New Jersey Department of Environmental Protection and Energy (NJDEPE) agencies were notified. In 1985, Vectre Corporation was hired by Ames Rubber Corporation (Ames) to complete a "Phase I Site Investigation" report, numerous other reports, and plans were submitted to NJDEPE by Vectre Corporation during the subsequent six years. Such plans and reports include:

- "Remedial Investigation Work Plan," September 1987.
- "Draft Remedial Investigation Report," February 1989.
- "Final Remedial Investigation Report," January 1990.
- "Draft Hydrogeologic Test Proposal." June 1990.

In May 1991, Vectre Corporation submitted a Groundwater Remediation Plan to NJDEPE. Based on investigations of the site's hydrogeologic characteristics and groundwater contamination, a pump and treat system was recommended as the best alternative to remediating groundwater contamination at Ames' Wantage, New Jersey site. On July 13, 1992, the NJDEPE approved air stripping technology as an acceptable remedial action alternative per paragraph 22 of the 1988 Administrative Consent Order (ACO). R. E. Wright Associates, Inc. (REWAI) was hired in July 1992 to complete the design and construction of an appropriate pump and treat system. As part of the design, REWAI was requested to complete a Remedial Action Plan (RAP).

A draft RAP was prepared by REWAI in accordance with paragraph 23 and Appendix C of the ACO between Ames and NJDEPE, and it was submitted to NJDEPE on September 11, 1992 on behalf of Ames. The draft RAP was conditionally accepted by

NJDEPE in late September. This final RAP, herein, incorporates NJDEPE's review comments of the draft RAP. The purpose of the RAP is to discuss the remedial design, the overall start-up and testing procedures, the system effectiveness program (short term and long term) to be implemented, and short- and long-term operation and maintenance of the groundwater collection and treatment system. Completion of these tasks will allow determination of the effectiveness of a functional groundwater pump and treat remediation system and the respective impact on the existing contaminant plume.

The text herein includes a discussion on (1) the general design of the remedial system, (2) schedule of implementation, (3) the System Effectiveness Program (SEP) to be implemented, (4) both short-term and long-term operations and maintenance of the system, and (5) a cost estimate.

2.0 DESIGN

The design of the remedial system is based on communication with Ames and Vectre Corporation; a site visit by REWAI engineers on July 30, 1992; REWAI's many years of experience in designing, constructing, operating, and maintaining similar groundwater remedial systems; and information obtained from Vectre Corporation's "Groundwater Remediation Plan - May 24, 1991" and "Final Hydrogeologic Report - November 18, 1991."

In general, REWAI has designed a remedial system consisting of: (1) a groundwater collection system comprised of three existing wells (RW-2, MW-6B, and PW-1) equipped with automated pumping systems; (2) a conveyance system consisting of piping (electric and water) from each of the three recovery wells to the treatment facility and from the treatment facility to Ames' existing process water storage tower; (3) a prefabricated treatment building, equipment slab, and foundation; and (4) a treatment system consisting

of an equalization tank, a packed tower aerator (PTA) and blower, two transfer pumps, and a full electrical control system equipped with appropriate system safeguard features.

An engineer's Remedial System Design Basis Report with five supporting design drawings has been developed and will be submitted to the department at the time the Treatment Works Approval (TWA) application is submitted.

3.0 SCHEDULE OF IMPLEMENTATION

The following is a schedule of implementation for the RAP.

- Within 60 days from Ames receipt of NJDEPE conditional approval of the draft RAP (October 5, 1992), Ames will review the current New Jersey Pollutant Discharge Elimination System-discharge for surface water (NJPDES-DSW) application and complete any modifications as necessary to incorporate the proposed system.
- Within 45 days of NJDEPE issuance of NJPDES-DSW permit, Ames will submit a complete TWA application package.
- Construction and operation will be conducted in accordance with the TWA.

4.0 SYSTEM EFFECTIVENESS PROGRAM

REWAI proposes the following SEP in order to evaluate the overall performance of the groundwater remedial system. The objective of the SEP is to measure the degree of effectiveness the remedial system has in controlling and capturing the groundwater contaminant plume and treating the contaminated groundwater.

The SEP will be completed in two phases. Phase I will be the initial phase completed over the first 30 days of continuous system operation and Phase II will be the long-term phase completed over the subsequent 11 months at which time the SEP may be revised based on the results and interpretation of obtained data.

The SEP will include (1) acquisition and/or formulation of a data baseline for the 3 recovery wells, 1 off-site well, and 13 on-site wells, (2) mechanical and performance testing of the completed collection and treatment system, (3) post start-up data acquisition, (4) additional sampling and analyses of the recovery wells and treatment system samples, and (5) data review and reporting.

4.1 Baseline Data

Prior to completion of construction, a review of existing site data will be made in order to assure that a current and sufficient data base is available. This site data review will include horizontal and vertical survey data of the off-site and on-site wells, and an accurate site map. If there is inadequate, outdated or questionable data, additional baseline data will be obtained.

Given the above Schedule of Implementation, the NJDEPE approval process, the tentative construction schedule, baseline groundwater sampling, and water level measurements of all on-site wells and one off-site well (OS-1) is projected to be performed in May 1993 in conjunction with the current NJPDES-DGW requirements. Samples will be analyzed by a NJDEPE certified laboratory for VOCs using United States Environmental Protection Agency (EPA) Method 601.

4.2 Mechanical and Performance Testing

Prior to start-up of the remedial system, all electrical and mechanical controls and components will be dry tested for proper operation. The treatment system will then be tested using clean water during which all pipe, pipe fittings, and appurtenances will be examined for leaks and all control points and alarms checked for proper operation. Any potential problems will be diagnosed and immediately corrected. The system will then be preliminary started and properly balanced. Balancing involves adjusting the flow rates from each recovery well such that the respective well pumps cycle on a minimum basis to obtain the desired cone of depression. Also, the treatment system will be balanced by adjusting the tower influent and effluent transfer pumps so they cycle on a minimum basis.

The system will be operated continuously for approximately four hours, after which time, a water sample will be taken from the treatment system influent and effluent sampling ports. These samples will be analyzed for VOCs using EPA Method 601. The entire system will then be shutdown until the laboratory analytical results indicate that the treatment system can meet the applicable NJPDES-DSW discharge permit limits. At that time, the system will be "officially" started for long-term sustained operation. At the end of the preliminary four-hour testing phase, a qualified REWAI field technician will train selected owner personnel on the proper operation and maintenance of the system.

4.3 Data Acquisition

Prior to long-term "official" start-up of the remedial system, a full round of static water level measurements will be obtained from the recovery wells, and all the off-site and on-site wells. These measurements will be obtained using an electric water tape with measurements recorded to a 1/100th of a foot.

During long-term start-up, water level measurements will be obtained from each recovery well on a frequent basis. Measurements will be recorded until the water level draws down to the "off" water level control probe. Also, water level measurements from all the off-site and on-site wells will be collected on a regular basis (at least twice a day for the first five days). A full round of water level measurements will then be obtained once a week for the remaining portion of the Phase I SEP (three weeks). Water levels will be taken once a month during Phase II of the SEP (11 months).

Flow meter readings will be obtained from the three recovery wells and the treatment system influent and effluent on a daily basis for the first five days, three times a week for the remaining portion of the Phase I SEP (three weeks) and on a weekly basis during Phase II of the SEP.

4.4 Additional Sampling and Analysis

After long-term "official" start-up of the remedial system, additional sampling and analysis (S/A) will be conducted as part of the Phase I and Phase II SEP. Phase I additional S/A will consist of weekly sampling of the three recovery wells and treatment system influent and effluent sample ports. Phase II S/A will be completed in accordance with the permit and/or the ACO requirements. Depending on the system start-up date (projected to be summer or fall of 1993), a full round of groundwater samples from all on-site and off-site wells will be collected within six months of continuous long-term start-up operation. This sampling event is projected to be in November 1993 or May 1994 in conjunction with the current NJPDES-DGW permit requirements. Another full round of groundwater samples from all off-site and on-site wells will be collected approximately 12 months after official start-up in conjunction with the current NJPDES-DGW permit requirements. This latter sampling event will thus constitute the last Phase

II sampling requirement. All samples will be obtained following NJDEPE protocols and analyzed for VOCs using EPA Method 601 by a NJDEPE certified laboratory. During the Phase II SEP, the system effluent will be sampled in accordance with the NJPDES-DSW permit requirements.

Review of the treatment system influent and effluent and the recovery well sampling results will allow interpretation of the operational efficiency of the treatment system as well as allow determination of the general trending of the individual wells. Comparison of the baseline data and Phase I and II data will indicate the degree of impact the recovery wells are having on the groundwater contamination plume.

4.5 Review and Reporting

The above Phase I data will be reviewed and assimilated into a presentable report format and will be submitted to NJDEPE within 90 days upon completion of Phase I. A letter report will be prepared and include the Phase I results and an interpretation of the results as applicable to the overall efficiency and effectiveness the system has on controlling and treating the groundwater contaminant plume. As a minimum, the following will be submitted as part of the letter report:

- Pre-start-up and 30 day interval groundwater elevation contour map.
- Groundwater chemistry tables showing baseline and Phase I analytical results.
- Time/concentration graphs of the treatment system influent and effluent and recovery well analytical results.

- Time/volume pumped histogram from each recovery well and the treatment system.

All Phase II data will be presented in an annual report which will be similar to and elaborate on the Phase I report. The Phase II report will be submitted within 90 days after completion of the first full year of operation.

5.0 OPERATION AND MAINTENANCE

Operation of this remedial system is completely automated. The system has been designed with a safeguard package which will shutdown the system in the unlikely event of a preprogrammed malfunction. Also, the treatment system will be equipped with an automated alarm notification system which will contact appropriate Ames personnel via a phone dialer of any pre-programmed equipment/system malfunctions. All shutdowns, planned or unplanned, greater than 48 hours in duration will be reported to NJDEPE within 7 days.

Also, on a weekly basis, the system will be inspected by Ames personnel for proper operation, leaks, and any other potential problems. During this time, the recovery wells and treatment system flowmeter readings, as well as other pertinent system operational data, will be recorded in an on-site system operations log book. Maintenance of the remedial system is expected to be minimal. All normal preventative maintenance will be completed in accordance with the manufacturers recommendations listed in the Operation and Maintenance Manual.

- Time/volume pumped histogram from each recovery well and the treatment system.

All Phase II data will be presented in an annual report which will be similar to and elaborate on the Phase I report. The Phase II report will be submitted within 90 days after completion of the first full year of operation.

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6.0 CLEAN-UP

The remedial system will operate until recovery well groundwater concentrations reach background levels or concentrations mutually agreed upon by Ames and NJDEPE-BAP. The NJDEPE proposed guideline clean-up standards may be utilized for clean-up and closure of the site and deactivation of the remedial system.

7.0 COST ESTIMATE

The following is a breakdown of the cost estimate to implement the RAP.

• Design (Drawings and Report) and Remedial Action Plan Preparation	\$ 31,350
• Construction Mobilization	\$ 3,800
• Collection and Discharge System Installation	\$ 28,100
• Treatment System (Includes Building and Foundation)	\$ 69,585
• As-Built Drawings, O&M Manual, Start-Up, and Training	\$ 6,100
• Phase I SEP	<u>\$ 27,500</u>
Total	<u>\$ 166,430</u>

ATTACHMENT E



Excellence
Through Total Quality

Ames Rubber Corporation

Ames Boulevard
Hamburg, New Jersey 07419

Tel: 973-827-9101

Fax: 973-827-8893

<http://www.amesrubber.com>

Certified Mail - Return Receipt Requested

December 20, 2000

Mr. Thomas McClachrie
NJDEP - Bureau of Field Operations
2 Babcock Place
West Orange, N.J. 07052

Re: Annual Status Report per MOA
Ames Rubber Corporation - Wantage Facility
NJPDES DSW# NJ0085561

RECEIVED
DEC 27 2000

Dear Mr. McClachrie,

In accordance with the Memorandum of Agreement ("MOA") dated December 8, 1995 for the referenced site, the Ames Rubber Corporation has continued its ground water remediation program through 2000. The purpose of this letter report is to update you on the status of the remediation and the associated cost. Per your prior guidance, this report has been sent directly to your attention, rather than to the address specified in the MOA.

From December 1, 1999 through November 30, 2000, Ames pumped and treated a total of 17,839,878 gallons of ground water. After treatment, the water from production well PW-3 was routed to our storage tank for use in our manufacturing operations. The water from recovery wells PW-1, RW-2, and MW-6B was generally pumped directly to discharge after treatment, but was routed to our storage tank on occasion to supplement the supply from PW-3. The volume (gallons) from each well was:

	PW-1	PW-3	MW-6B	RW-2	Totals
December 1999	29787	3803493	44142	143653	4021075
January	134463	1208458	1628	148523	1493072
February	116637	1060469	0	136469	1313575
March	121124	1098546	0	149475	1369145
April	177994	1011611	107551	147474	1444630
May	166186	1095907	104759	159689	1526541
June	167531	1147042	95059	158028	1567660
July	75180	900170	102703	166896	1244949
August	210861	563226	104459	171412	1049958
September	180517	449058	109368	172657	911600
October	166578	527055	126105	186486	1006224
November	154671	424982	123289	188507	891449
Totals	1701529	13290017	919063	1929269	17839878

Sampling of the 12 key monitoring wells was performed by Mr. Albert A. Pleva of Terra Nova Associates on November 9, 2000. A copy of the Terra Nova Associates report of field



sampling activities is attached. All ground water samples were analyzed for volatile organics ("VOC") by Integrated Analytical Laboratories, LLC using EPA Method 624. The laboratory data from this sampling event is provided on the attached floppy disk entitled "Disk 1". A hard copy laboratory report is available upon request.

Attached Table 1 summarizes the laboratory results from this sampling event. Attached Table 2 provides the lab results for total VOC's from each key monitoring well for each sampling event since commencement of remediation.

Discussion

The total annual cost of operating and maintaining the remediation system has remained stable at approximately \$33,000. The cost of the annual monitoring well sampling was just under \$3,000.

The quantity of water pumped for 2000 was 5.4 million gallons less than in 1999. Most of this difference results from the reduced demand for process cooling water from production well PW-3. This is a reflection of our reduced product output from the plant. The remaining recovery wells, MW-6B, PW-1, and RW-2, are operated continuously for hydraulic control and contaminant recovery.

Water table level measurements were not obtained from the four recovery wells during the November 2000 sampling event. These wells are sampled from the sample taps on the influent lines within the air stripper building. The wells themselves were never opened. This was an omission which will be avoided for future sampling events.

The November, 2000 results for individual wells are generally lower than historical averages. Natural attenuation processes are actively occurring, as evidenced by the detection of degradation products of 1,1,1 trichloroethane (1,1 dichloroethane, 1,1 dichloroethene) in most key wells. The total VOC results for wells MW-4, MW-6B, MW-9, and MW-OS1 are above last year's results and cumulative averages of prior results, but within the range of prior results. Since the contaminant sources no longer exist, we can only attribute these variations to typical fluxuations in environmental conditions, field sampling and laboratory testing.

Ames will continue to operate and maintain the remediation system until further notice, and will perform annual monitoring well sampling again in November of 2001. The next report on remediation progress will be provided to you in December of 2001.

If you have any questions in this matter, please call me at (973) 209-3282.

Sincerely,

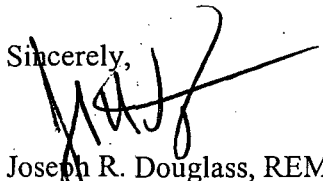

Joseph R. Douglass, REM
Director of Regulatory Affairs

Table 1

Key Monitoring Wells
November, 2000

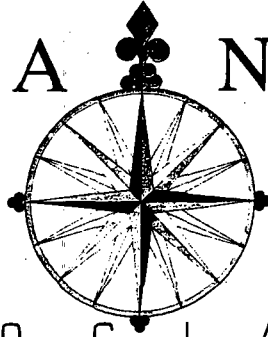
Nov-00	1,1 DCA	1,1 DCE	Chloroform	1,1,1 TCA	1,2 DCA	TCE	Toluene	Ethylbenzene	Total Xylenes	Total VOC's
MW-1	U	U	U	1.22	U	U	U	U	U	1.22
MW-2	U	U	U	0.739	U	U	U	0.406	1.45	2.595
MW-4	332	257	0.429	898D	0.438	2.05	1.18	U	U	1491.097
MW-6B	6.96	11.3	U	25.6	U	U	U	U	U	43.86
MW-6C	16.3	11.3	U	7.38	U	U	U	U	U	34.98
MW-7	4.3	5.99	U	7.64	U	U	U	U	U	17.93
MW-9	89.5	52.8	U	297D	U	0.591	1.05	U	U	440.941
MW-10	5.16	2.97	U	15.7	U	U	U	U	U	23.83
OS-1	4.04	18.8	U	44.8	U	U	U	U	U	67.64
PW-1	6.45	4.95	U	21.7	U	U	U	U	U	33.1
PW-3	15	9.24	U	51	U	U	U	U	U	75.24
RW-2	16.4	35	0.934	87.5	U	1.97	U	U	U	141.804
U = Undetected										
D = The compound was reported from the diluted analysis										

Table 2

Total VOC's in Key Monitoring Wells Since Commencement of Remediation

well #	Baseline Nov-94	May-95	Nov-95	Nov-96	Nov-97	Nov-98	Nov-99	Nov-00
MW-1	47	10	8	3	0	2	3	1
MW-2	63	14	122	4	20	21	4	3
MW-4	551	1061	812	290	833	1013	1130	1491
MW-6B	59	57	47	24	31	30	27	44
MW-6C	3	161	132	22	131	27	112	35
MW-7	124	144	52	24	53	32	24	18
MW-9	53	35	14	5	24	0	6	441
MW-10	155	16	15	3	17	6	28	24
OS-1	8	50	83	19	45	29	50	68
PW-1	146	83	37	24	28	24	15	33
PW-3	274	152	130	62	66	83	49	75
RW-2	459	462	304	116	163	142	131	142

TERRA NOVA



A S S O C I A T E S

November 15, 2000

Environmental Consultants

Mr. Joseph R. Douglas
Director of Regulatory Affairs
Ames Boulevard
RT. 94
Hamburg, NJ 07419

Dear Mr. Douglas:

Enclosed please find a copy of the field sampling table for the groundwater sampling round of twelve wells from the Ames Rubber Corporation Wantage site conducted by Terra Nova Technical on November 9, 2000.

Should you have any questions or comments, please do not hesitate to call me at the number 609-259-0020.

Sincerely,
Terra Nova Technical Corp.

A handwritten signature in dark ink, appearing to read 'Albert A. Pleva'.

Albert A. Pleva, President

Enclosures

P.O. Box 657 Allentown, New Jersey 08501 • PHONE 609-259-0020 • FAX 609-259-5454

Groundwater Sampling Report

of

AMES RUBBER CORPORATION
Wantage, NJ

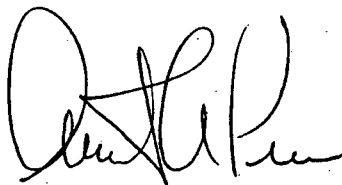
Prepared for:

Joseph R. Douglass
Director of Regulatory Affairs
Ames Rubber Corporation

Prepared by:

Terra Nova Technical
P.O. Box 657
Allentown, NJ 08501

November, 2000

A handwritten signature in black ink, appearing to read 'Albert A. Pleva', is written over a horizontal line.

Albert A. Pleva, President

INTRODUCTION

Al Pleva, Chris May and Mike Pleva of Terra Nova Technical conducted the groundwater sampling of twelve wells as directed by Mr. Joseph R. Douglass of the Ames Rubber Corporation on November 9, 2000. All sampling was conducted in accordance with the NJDEP Field Sampling and Procedures Manual of May 1992. The weather was overcast and rainy to approximately 10 a.m., wind light with temperature about 50°F.

Procedures:

Water level Determinations

Water levels were measured with a slope indicator electronic water level meter, Model 501, to the nearest 0.01-foot as measured from the top of the inner casing mark or adjacent to lock if no mark is present. The water level meter line was wiped with a DI soaked paper towel as it was retracted from the well. The probe was then rinsed with DI water and paper towel dried. The well depth, depth to water, well diameter and purge water calculations were noted in the field log.

The well calculations to determine one standing column were based on the following:

<u>Casing Diameter</u>	<u>Gallons/Linear Foot</u>
4 inches	0.652
6 inches	1.52

See table II for well and purging information.

Well Evacuation

The water standing in the well is usually not representative and should be replaced with fresh formation water. Generally three to five volumes must be purged prior to sampling unless the well is of low yield and incapable of producing three volumes at a purge rate of 0.25 to 0.50 gallons per minute.

Shallow wells were evacuated with 12-volt submersible whale pumps or 12-volt peristaltic pumps (suction lift). All tubing in the wells is dedicated polyethylene drinking water grade tubing with dedicated check valves.

Deeper wells MW-4, MW-6C, MW-7 and MW-9 were purged with Submersible QED purge pumps or Grundfos Rediflo pumps with dedicated polyethylene drinking water grade tubing. Recovery wells were purged of 2 gallons so lines were clear prior to sampling.

Prior to purging, a sample of the well water was collected and analyzed for Temperature, pH, specific conductivity and dissolved oxygen. As purging began, the purge rate was adjusted so as not to cause sufficient drawdown of the well, which would expose the screen.

As purging continued, the aforementioned field parameters were measured after every volume was purged. After three volumes were purged and these parameters remained stable (with 10% of each of the three previous readings), sampling then began. In cases where wells were of low recovery, purging rates were kept at or below ½ gallon per minute. These wells were allowed to recover to a volume sufficient for sampling.

Purge Water Handling

Purge water from the monitoring wells was discharged to the ground surface away from the well head.

Sampling

Prior to sampling a depth to water measurement was taken and the time recorded. If there was sufficient volume in the well, sampling proceeded. If volume was not of sufficient volume, the well was allowed to recover; however, recovery time is recommended to be no greater than 2 hours by NJDEP.

Each well was sampled with a lab cleaned dedicated Teflon bailer with a Teflon leader. The order of sample collection was as follows: volatiles then final field parameters.

Sample Handling

Immediately after sample collection the pre-labeled sample containers were placed in coolers with wet ice. The chain of custody form and field logs was completed prior to sampling the next well. At the end of the day, samples were custody sealed and left with Mr. Douglas for laboratory pickup.

Field QA Samples

The lab provided a trip blank for each day of sampling. Trip blanks were analyzed for VOA only. Field or equipment blanks, were taken by pouring lab water over an un-used pre-cleaned teflon bailer. This water was collected in samples labeled FB. The Field Blank is to be analyzed for volatiles.

Field Meters

The field meters used on this site for groundwater measurements included two Horiba U-10's used for temp, pH, sp conductance and D.O., also a YSI 3500, which was used for temperature, pH and specific conductivity. YSI 57 with Clark type probe was used for dissolved oxygen measurements. Terra Nova Associates is certified by NJDEP, Lab Certification #3488 for those parameters mentioned above.

Standardization of each meter was conducted daily. For pH and conductivity, the standardization took place each morning and approximately after every four hours of operation. The dissolved oxygen meter was standardized by Winkler Titration weekly and then daily by the Saturated Waster Method. Results of the standardization and sample results are recorded in parameter specific logbooks for each meter.

Problems or Notes

No problems were encountered.

**AMES RUBBER CORP
WANTAGE SITE
Table I**

SAMPLE POINT	MW-1	MW-2	MW-4	MW-6B	MW-6C	MW-7	MW-9	MW-10	OS-1	RW-2	PW-1	PW-3
TOTAL DEPTH	28.0	18.0	49.0	—	75.0	70.0	45.0	34.0	26.0	—	—	—
DEPTH TO WATER	12.57	15.08	30.64	—	7.17	22.35	29.84	19.52	12.26	—	—	—
HEIGHT TO WATER COL.(FT)	15.4	2.9	18.4	—	67.8	47.7	15.2	14.5	13.7	—	—	—
ONE CASING VOL. (GAL)	10.1	1.9	27.9	—	103.1	72.4	23	9.4	20.8	—	—	—
THREE CASING VOL (GAL)	30.2	6.0	83.7	—	309	217.3	69	28.3	62.6	—	—	—
ACTUAL VOL PURGED (GAL)	32.0	6.0	85.0	—	155*	95*	70	29.0	63.0	—	—	—
DATE SAMPLED	11/9/00	11/9/00	11/9/00	11/9/00	11/9/00	11/9/00	11/9/00	11/9/00	11/9/00	11/9/00	11/9/00	11/9/00
TIME SAMPLED	1055	1100	1235	0910	1035	1150	1230	1240	1010	0905	0915	0900
FIELD PARAMETERS												
pH	7.32	7.00	7.28	7.24	7.78	7.79	6.90	7.12	7.29	7.31	7.23	7.13
SCOND um/cm	680	718	897	992	754	597	829	1060	1090	975	848	913
TEMP C	12.8	13.4	13.5	12.6	12.4	12.2	12.1	14.4	12.3	14.3	13.6	14.1
DISSOLVED OXYGEN (ppm)	1.80	3.40	3.40	6.12	1.88	.88	2.21	4.28	0.86	4.07	4.03	6.08
APPEARANCE	CLEAR NO ODOR	CLEAR NO ODOR	CLOUDY NO ODOR	CLEAR NO ODOR	CLOUDY ODOR	CLOUDY NO ODOR	CLEAR NO ODOR	CLEAR NO ODOR	CLEAR NO ODOR	CLEAR NO ODOR	CLEAR NO ODOR	CLEAR NO ODOR
PURGE METHOD	WP	PP	SP	RW	SP	SP	SP	WP	WP	RW	RW	RW
SAMPLE METHOD	BT	BT	BT	SB	BT	BT	BT	BT	BT	SB	SB	SB

PP = PERISTALTIC PUMP
RW = RECOVERY WELL
BT = BAILER TEFLON

SP = SUBMERSIBLE PUMP
* = well purged dry at less than 0.5 GPM

WP = WHALE PUMP

**INTEGRATED ANALYTICAL LABORATORIES
CHAIN OF CUSTODY**

273 Franklin Rd
Randolph, NJ 07869

CLIENT & PROJECT

REPORTING

Name:	AMOS Rubber Co	Fax to:	
		Fax #:	
Address:		Report to:	Tom Douglas
		Address:	
Telephone #:		Invoice to:	
Fax #:		Address:	
Project Name:	AMOS Wentage		
Project Manager:			
Reference ID#:	PO#:		

SAMPLE INFORMATION


SAMPLE MATRIX

W - Waste SL - Sludge A - Aqueous
O - Oil X - Other S - Soil
GW - Groundwater SOL - Solid

[illegible]

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

CUSTODY LOG

Signature	Date	Time	Signature
Relinquished by: 	11/11/20		Received by:
Relinquished by:			Received by:
Relinquished by:			Received by:
Relinquished by:			Received by:
Relinquished by:			Received by:

LAB COPIES - WHITE & YELLOW; CLIENT COPY - PINK

Turnaround Time

<u>Conditional / TPHC</u>						Report Format
24 hr*	48 hr	72 hr	1 wk	NA	Other: <input type="text"/>	Results Only
<u>Verbal/Fax</u>						Reduced
24 hr*	48 hr*	72 hr*	1 wk*	2 wk	Other: <input type="text"/>	Regulatory
<u>Hard Copy</u>						SRP Disk**: dbf or wk1
72 hr*	1 wk*	2 wk*	3 wk	Other: <input type="text"/>	Other: <input type="text"/>	
*Prior to sample arrival, Lab notification is required.						

ANALYTICAL PARAMETERS / PRESERVATIVES

**** Circle format required**

[illegible]

INTEGRATED ANALYTICAL LABORATORIES CHAIN OF CUSTODY

CLIENT & PROJECT

REPORTING

Name: <u>AMES Rubber Co</u>	Fax to:
	Fax #:
Address:	Report to: <u>Joe Douglas</u>
	Address:
Telephone #:	Invoice to:
Fax #:	Address:
Project Name: <u>AMES WANTAGE</u>	
Project Manager:	
Reference ID#:	PO#:

Turnaround Time

Conditional / TPHC

24 hr* 48 hr 72 hr 1 wk NA Other:

Verbal/Fax

24 hr* 48 hr* 72 hr* 1 wk* 2 wk Other:

Hard Copy

72 hr* 1 wk* 2 wk* 3 wk Other:

*Prior to sample arrival, Lab notification is required.

Report Format

Results Only

Reduced

Regulatory

SRP Disk**: dbf or wkt

Other:

ANALYTICAL PARAMETERS / PRESERVATIVES

** Circle format required

1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	1 2 3 4 5 6	Preservatives
											1. HCL 3. HNO ₃
											2. NaOH 4. H ₂ SO ₄
											5. MeOH 6. Other
											COOLER TEMP. °C
											Comments

SAMPLE INFORMATION

SAMPLE MATRIX

W - Waste SL - Sludge A - Aqueous
O - Oil X - Other S - Soil
GW - Groundwater SOL - Solid

Sample ID	Sample Description	Sampling			Matrix	# of Containers	Lab ID
		Date	Time	am pm			
PW-3	Recovery well	11/9/00	0900	1	W	2	2
RW-2	"	"	1905	1	W	2	2
MW-6B	"	"	0910	1	W	2	2
PW-1	"	"	0915	1	W	2	2
TB	QC Sample	-	-	✓	W	2	2
FB	"	-	1005	✓	W	2	2
OS-1	OS MONT well	"	1010	✓	W	2	2
MW-6C	MONT well	"	1035	✓	W	2	2
MW-1	"	"	1055	✓	W	2	2
MW-2	"	"	1100	✓	W	2	2

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved.

Concentrations Expected

Known Hazard: yes no

LOW MED HIGH

Describe:

CUSTODY LOG

Signature	Date	Time	Signature
Relinquished by: <u>[Signature]</u>	11/9/00		Received by:
Relinquished by:			Received by:
Relinquished by:			Received by:
Relinquished by:			Received by:
Relinquished by:			Received by:

Comments:

Lab Case #

PAGE:

OF

ATTACHMENT F



U.S. Fish & Wildlife Service

Wallkill River National Wildlife Refuge

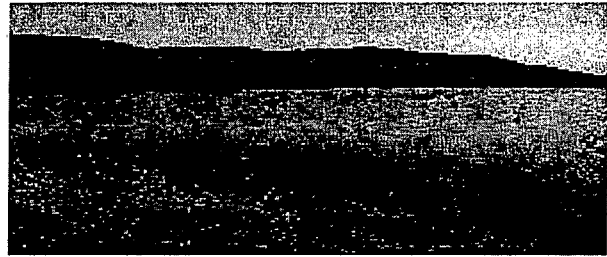
1547 County Route 565
Sussex, NJ 07461 - 4013

E-mail: wallkillriver@fws.gov

Phone Number: 973-702-7266

Visit the Refuge's Web Site:

<http://wallkillriver.fws.gov>



Liberty Marsh

Overview

Wallkill River National Wildlife Refuge

The Wallkill River NWR is located in Sussex County, New Jersey and Orange County, New York. Congress established the refuge in 1990 to preserve and enhance lands and waters in a manner that conserves the natural diversity of fish, wildlife, plants and their habitats for present and future generations. The management emphasis is on Federally-listed endangered and threatened species, migrating waterfowl and shorebirds, nesting and wintering grassland birds, and forest-dwelling birds.

The refuge also provides opportunities for public use. There are 3 nature trails for wildlife observation, three fishing access sites on the Wallkill River and three canoe access sites. The refuge also provides hunting opportunities.

As of 2007, the refuge encompassed about 5,100 acres. Land acquisition is still proceeding. The refuge enjoys strong support from the community.

The refuge staff also manage an unstaffed satellite, the Shawangunk Grassland NWR in Ulster County, New York.

Getting There . . .

From I-95 in South Jersey, take I-95 North (NJ Turnpike) to I-287 North. Then take State Route 23 North, through Hamburg, and turn right onto County Route 565 North (Glenwood Rd) by the Bank of New York in Wantage. The Refuge headquarters is 1.5 miles on left.

Traveling East on I-84 from Pennsylvania, travel across the Delaware River to New York State 33—

Recreation & Education Opportunities

Environmental Education

Fishing

Hunting

Interpretation

Photography

Wildlife Observation

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Management Activities

Approximately 1,800 acres of the refuge is grassland and old field. Cooperative farmers hay and graze approximately 500 acres of cool season grasslands. These grasslands are dominated by orchard grass, timothy, Kentucky bluegrass, smooth brome, and reed canary-grass. Refuge staff planted a diverse mix of warm season grasses on 57 acres. These grasses include big bluestem, little bluestem, Indian grass, and switchgrass. Most fields are in the oldfield stage of succession and are composed of a wide diversity of broadleaf plants, including goldenrods, asters, common milkweed, Canada thistle, wild bergamot, ox-eye daisy, and common mullein.

Besides haying and mowing, the refuge also has a prescribed burning program. The objective with both projects is to restore natural grassland conditions to support

Take New York State Exit 1 (Sussex, NJ) and travel south on State Route 23. Continue on State Route 23 through the borough of Sussex. Turn left on County Route 565 North (Glenwood Rd). Refuge Headquarters is 1.5 miles on left.

Traveling West on I-84 in New York State, take Exit 3W (Middletown) and after turning right off exit ramp, immediately get in left turning lane and turn left onto Route 6W. Travel 3.5 miles to Slate Hill. Turn left onto Route 284 South. Travel 9.1 miles to Unionville, NY. Turn left onto State Line Rd. After 1.3 miles, you pass over the Wallkill River (State Line turns into Oil City Rd). Continue another 1.3 miles to the stop sign. Turn right onto Liberty Corners Rd (This will become Lake Wallkill Rd. when you cross into New Jersey). Travel 1.4 miles to a fork in the road; stay left on Lake Wallkill Rd/Rt.667. Travel 5.6 miles to Route 565. Turn right on Route 565 South. Refuge Headquarters is 1 mile on right.

Get Google map and directions to this refuge/WMD from a specified address:

Your full starting address **AND** town and state
OR zip code

[Get Directions](#)

Google Maps opens in a new window

NOTE: When using this feature, you will be leaving the U.S. Fish & Wildlife Service domain. We do not control the content or policies of the site you are about to visit. You should always check site policies before providing personal information or reusing content.

These driving directions are provided as a general guide only. No representation is made or warranty given as to their content, road conditions or route usability or expeditiousness. User assumes all risk of use.

Wildlife and Habitat

A variety of habitats, including red maple swamps, calcareous fens, wet meadows, old fields, and oak-beech forests are found throughout the refuge. Associated with these habitats is an ever-changing variety of plants and wildlife.

nesting for grassland dependent birds.

The land adjacent to Liberty Loop Trail was managed as a sod farm for several decades prior to refuge acquisition in 1994. During this agricultural period, miles of ditches and a perimeter dike system were installed to drain the wetlands and segregate the site from the natural hydrology of the river. Despite these degradations the site is still used by thousands of ducks and geese during flood events. However, the remaining sod farm infrastructure still rapidly drains water off the area when the river recedes and wildlife use of the site is minimized.

The new dikes and water control structures will restore the wetlands and provide maximum flexibility to manage the site for wetland dependent wildlife. The site will primarily be managed as seasonally flooded wetlands for migrating waterfowl. However, the new infrastructure will enable the refuge to fully integrate management of the site for nongame wildlife as well. The site will be de-watered over winter to ensure continued use by wintering raptors such as short-eared owl, northern harrier, and rough-legged hawk. Summer drawdowns will be conducted to concentrate fish for herons and egrets. Also, some units will be disced and flooded to provide mudflat habitat for migrating shorebirds. Other areas will be used for nesting by grassland-dependent songbirds.

[Learn More>>](#)

[Learn More>>](#)

History

The refuge has a long and varied history. First, it was a home to native Americans, then farmers. Now, as farming declines, tourism and service are becoming the predominant economic activities and people both live and vacation in this semi-rural corner of New Jersey.

[Learn More>>](#)

ATTACHMENT G

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Parks and

Environmental Preserves

Federal

Delaware Water Gap National Recreation Area

Great Swamp National Wildlife Refuge

Wallkill National Wildlife Refuge

State Parks

Allamuchy/Stephens State Parks

Delaware and Raritan Canal State Park

Jenny Jump State Forest

High Point State Park

Kittatinny

Up A Lazy River

Wallkill National Wildlife Refuge

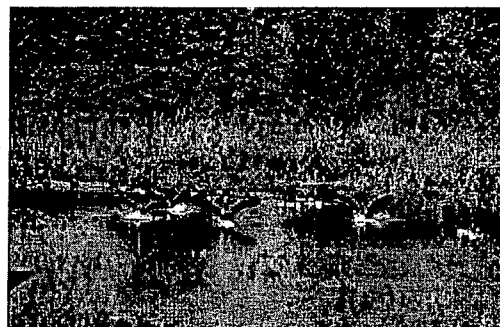
The Wallkill River shares with great rivers like the Nile and the Rhine the peculiarity of northward flow. Beginning at Lake Mohawk in Sparta it flows just west of Ogdensburg, Franklin and Hamburg to the New York State border. From there it eventually feeds the Hudson River near Kingston, NY after a 90 mile trek. It is the nine mile stretch of Sussex County river wetlands north of Hamburg that has given rise to the Wallkill River National Wildlife Refuge, which, since 1990, have been a haven for more than 225 species of birds, a wide variety of fish and wildlife; and those who love to watch them.

As a major watershed, wedged between the Appalachian Valley and Ridge to the west and the Highland Ridge

System to the east, the Wallkill River

provides migratory and nesting habitat for waterfowl, which use the valley as a conduit between eastern Canada and the Atlantic coast and between the Delaware and Hudson rivers. More than 225 species of birds, including 21 species of waterfowl, occur on the refuge.

Congress authorized the eventual purchase, providing funds and willing sellers become available, of 7500



Canada Geese

**State Park/
Paulinskill
Valley Trail**

**Round Valley,
Spruce Run,
Merrill Creek-
Reservoirs of
Recreation**

**Round Valley
State Park**

**Skylands
Botanical
Gardens**

Stokes Forest

**Wawayande
State Park**

**Park Map
Wildlife
Management
Areas**

**WMA
Overview**

WMA Hikes

**Sparta
Mountain
WMA**

**Wildcat Ridge
Preserves**

**Merrill Creek
Reservoir**

Blair Creek

**Hutcheson
Memorial
Forest
(Mettlers
Woods)**

**Schiff
Environmental
Preserve**

County Facilities

Natirar

**Lord Stirling
Environmental
Education
Center**

acres of fish and wildlife habitat. 4200 acres are now under management, partially accessible by two major trails and, of course, the river.



Wood Ducks

The Wood Duck Nature Trail, accessible from Route 565, a few hundred yards beyond the turnoff from Route 23, runs approximately 2 miles on a former railroad bed ending at the river, and offers a

nature photography blind and benches for pause along the way. Another mile or so up Route 565, a recently renovated farmhouse serves as Park headquarters, where visitors can find trail maps and more information about the wildlife that lives in the Refuge.

Further north, near the state border and linked with the Appalachian Trail, the Liberty Loop circles wetland and grassland for 2 1/2 miles of prime bird and wildlife watching.



Liberty Sod Farm

Hunting is prohibited in this section, so there is no reason to avoid an autumn walk. With an agricultural history and network of drainage ditches similar to those at the Great Meadows of the Pequest, this area is also known for its black dirt. No longer farmed, the ditches now teem with insects, frogs, salamanders, turtles and snakes, all tasty morsels for great blue herons and snowy egrets that frequent the area. The small mammals that also feed here attract a population of raptors which includes golden eagles,

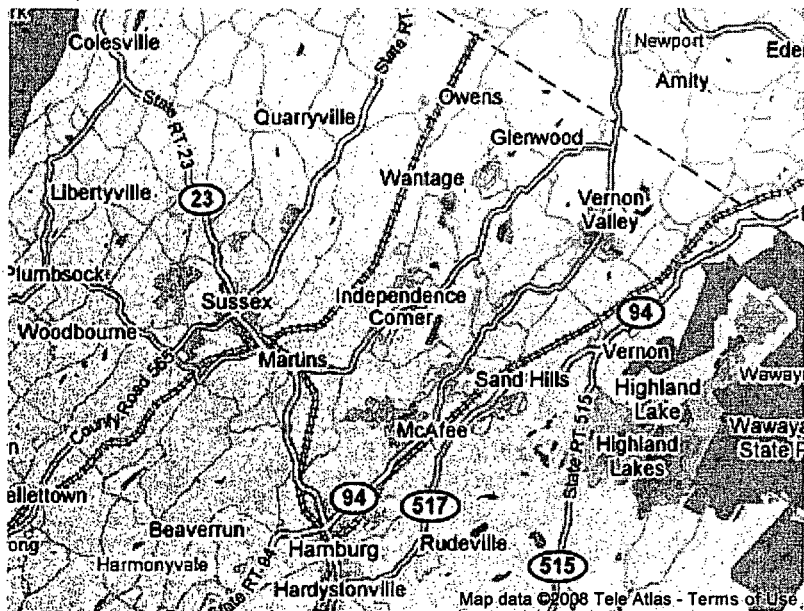
bald eagles, peregrine falcons, red-tailed hawks, American kestrels and marsh hawks. The trail adopts an old railroad grade leading through the Pochuck Swamp, thickly forested and dotted with red maples, vibrant in autumn and home to dozens more species. The adventurous can hike further along the Appalachian trail.

Because it is a wildlife refuge, human access to the wetlands is restricted, and the best way to see the Wallkill is by canoe.



Park Headquarters

The river is lazy and your trip is effortless save for a few spots where you may have to get out haul your boat over a shallow spot or around a beaver dam. The first of three access points, near the Wood Duck trailhead on Route 565, provides drop-off and pick-up only. The Bassets Bridge Canoe and Fishing Access provides a better place to start your trip with ample parking and an easy walk to the river. A third put-in lies just east of where Oil City Road crosses the river in New York State. Canoeing floats you through beautiful floodplain forests, wet meadows, and under tall rock cliffs, and, if you bring your pole, the river is full of warm water fish, most notably bass and pickerel. The river flow is sluggish enough to allow a comfortable paddle along one way of your journey so you don't have to worry about a second pick-up point.



Wallkill River National Wildlife Refuge
 1547 County Route 565
 Sussex, New Jersey 07461
 Phone: (973) 702-7266

Comments

No comments yet

*Name:

Email:

☐ Notify me about new
 comments on this page

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Questions and Comments

-- <http://www.njskylands.com> -- Revised: January, 2008-

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Wallkill River National Wildlife Refuge

From Wikipedia, the free encyclopedia

Wallkill River National Wildlife Refuge is part of the National Wildlife Refuge system.

Established in 1990 by Public Law 101-593, the refuge straddles 9 miles (14 km) of the Wallkill River at and just south of the New York-New Jersey border. Most of the refuge is in Sussex County, New Jersey, with the remainder in Orange County, New York. Two miles of the Appalachian Trail travel through the refuge, and the refuge has three additional walking trails.

The refuge has more than 5,100 acres (21 km²) of land and is managed primarily for migratory bird habitat, the endangered bog turtle and wetlands. Where compatible, the refuge offers outdoor recreation opportunities including hunting, fishing, interpretation, environmental education, photography, wildlife viewing, hiking, canoeing and cross-country skiing. At the northern end of the refuge, in the black dirt wetlands, the refuge manages a series of waterfowl impoundments for migratory waterfows and shorebirds. Wood ducks, canvasbacks, mergansers, mallards and many other species frequent the refuge during spring and fall migrations. Raptors commonly use the refuge as well, with red-shouldered hawks, northern harriers and kestrels frequently observed.

External links

- Wallkill River National Wildlife Refuge (<http://wallkillriver.fws.gov/>)
- National Wildlife Refuge System (<http://www.fws.gov/refuges/>)
- bog turtle (<http://ecos.fws.gov/speciesProfile/SpeciesReport.do?spcode=C048>)
- Appalachian Trail (<http://www.nps.gov/appa/>)

Retrieved from "http://en.wikipedia.org/wiki/Wallkill_River_National_Wildlife_Refuge"

Categories: National Wildlife Refuges in New York | National Wildlife Refuges in New Jersey | Wallkill River | Appalachian Trail | Sussex County, New Jersey | Protected areas of Orange County, New York

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ATTACHMENT H

Capabilities / Facilities

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Ames coordinates its production activities between facilities in North America and Europe. This allows us to draw on deep expertise on both continents, while delivering products that exactly match each market's needs.

- Precision Coatings
- Precision Moldings
- Precision Extrusions

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Processes & Materials

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Home

Ames Rubber Corporation

Hamburg, NJ

Our Hamburg facility houses our corporate offices and Design Solutions Center, as well as our manufacturing operations, including our steam, electric and injection press molding facilities and our extrusion processes, with screw and ram extruders, thru-feed and crosshead processes.

19 Ames Blvd.
Hamburg, NJ 07419
Telephone: (973) 827-9101
Fax: (973) 827-8893
E-mail: robert.dondero@amesrubber.com

Ames Rubber Corporation

Wantage, NJ

Our Wantage facility is the center for our various spray coating processes, including air spray and electrostatic spray capabilities. Recent advances in engineering and fixturing have enabled Ames to apply high performance elastomers onto irregularly shaped composite substrates.

Route 565
Wantage, NJ 07461

Avon-Ames, Ltd.

Melksham, Wiltshire, UK

Avon-Ames provides fuser rolls, pressure rolls, document feed rolls, paper collating, and sorting rolls to the industry. Major customers include Hewlett Packard, Toshiba, Xerox and Lexmark.

www.avon-ames.com

Manvers House
Kingston Road
Bradford on Avon, Wiltshire
BA15 1AA, England
Telephone: 44 (0)1225 861100
Fax: 44 (0)1225 861199
E-mail: enquiries@avon-rubber.com

Avon-Ames s.r.o.

Rudnik, Czech Republic

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www.avon-ames.com

54372 Rudnik
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Czech Republic
Telephone: 420 499 407 201
Fax: 420 499 407 390
E-mail: avon.czech@avon-rubber.com

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- ◆ [Film Coated Products](#)
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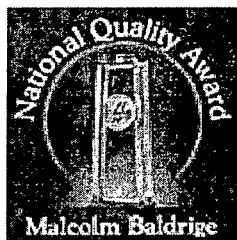
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Polymer Products

- ▶ **Prep**
 - ◆ Weighing
- ▶ **Mixing**
 - ◆ Mills (3)
- ▶ **Testing**
 - ◆ Physical Properties
 - ◆ Mechanical Properties
 - ◆ Electrical Properties
 - ◆ Processing Properties

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Extruded Products

- | | |
|---|---|
| <ul style="list-style-type: none"> ▶ Material Prep <ul style="list-style-type: none"> ◆ Milling ◆ Material Handling ▶ Metal Prep <ul style="list-style-type: none"> ◆ Grit Blasting ◆ Aqueous Cleaning ◆ Adhesive Application ◆ Chemical Prep ▶ Extruding <ul style="list-style-type: none"> ◆ Screw Extruders ◆ Ram Extruders ◆ Thru-Feed ◆ Crosshead ▶ Curing <ul style="list-style-type: none"> ◆ Curing Ovens ◆ Vulcanizers | <ul style="list-style-type: none"> ▶ Finishing <ul style="list-style-type: none"> ◆ Profile Grinders ◆ Straight Grinders ◆ Plunge Grinders ◆ Sanding ◆ Polishing ◆ Trimmers ◆ Auto Cutters ◆ Perforation ◆ Die Cutting ▶ Assembly <ul style="list-style-type: none"> ◆ Manual ◆ Automated ▶ Quality <ul style="list-style-type: none"> ◆ Contact Measurement ◆ Non-Contact Measurement ◆ SPC |
|---|---|

► **Reman and Reclaim**

- ♦ Water Jet

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Molded Products

► **Material Prep**

- ♦ Milling
- ♦ Material Handling

► **Metal Prep**

- ♦ Grit Blasting
- ♦ Aqueous Cleaning
- ♦ Adhesive Application
- ♦ Chemical Prep

► **Molding**

- ♦ Steam Presses
- ♦ Electric Presses
- ♦ Injection Presses

► **Curing**

- ♦ Curing Ovens
- ♦ Vulcanizers

► **Finishing**

- ♦ Profile Grinders
- ♦ Straight Grinders
- ♦ Plunge Grinders
- ♦ Sanding
- ♦ Polishing
- ♦ Trimmers
- ♦ Sanders
- ♦ Perforation
- ♦ Die Cutting

► **Assembly**

- ♦ Manual
- ♦ Automated

► **Quality**

- ♦ Contact Measurement
- ♦ Non-Contact Measurement
- ♦ SPC

► **Reman and Reclaim**

- ♦ Water Jet

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Cast Products

► **Material Prep**

- ♦ Material Handling
- ♦ Drum Rolling
- ♦ Degassing

► **Metal Prep**

- ♦ Grit Blasting
- ♦ Aqueous Cleaning
- ♦ Adhesive Application

► **Casting**

- ♦ Silicone Systems
- ♦ Urethane Systems
- ♦ LIM Presses

► **Finishing**

- ♦ Profile Grinders
- ♦ Straight Grinders
- ♦ Plunge Grinders
- ♦ Sanding
- ♦ Polishing
- ♦ Trimmers

► **Assembly**

- ♦ Manual
- ♦ Automated

► **Quality**

- ♦ Contact Measurement

► **Curing**

- ♦ Curing Ovens

- ♦ Non-Contact Measurement

- ♦ SPC

► **Reman and Reclaim**

- ♦ Water Jet

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Film Coated Products

► **Material Prep**

- ♦ Liquid Mixing
- ♦ Material Handling
- ♦ Drum Rolling
- ♦ Degassing

► **Metal Prep**

- ♦ Grit Blasting
- ♦ Aqueous Cleaning
- ♦ Adhesive Application

► **Film Coating**

- ♦ Air Spray
- ♦ Electrostatic Spray
- ♦ Flow Coating
- ♦ Totalstat
- ♦ Dip Coating
- ♦ Doctor Blade

► **Curing**

- ♦ Curing Ovens

► **Finishing**

- ♦ Profile Grinders
- ♦ Straight Grinders
- ♦ Plunge Grinders
- ♦ Sanding
- ♦ Polishing
- ♦ Trimmers
- ♦ Oscillating Sanders

► **Assembly**

- ♦ Manual
- ♦ Automated

► **Quality**

- ♦ Contact Measurement
- ♦ Non-Contact Measurement
- ♦ SPC

► **Reman and Reclaim**

- ♦ Water Jet

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Quality Assurance

► **Mechanical**

- ♦ Gauge Blocks
- ♦ Surface Plates
- ♦ Spring Testers
- ♦ Hardness (Rockwell)
- ♦ Plug Gauges
- ♦ Thread Gauges
- ♦ Ring Gauges
- ♦ Height Gauges
- ♦ Internal Groove Gauges
- ♦ Contour Gauges
- ♦ OD Gauges
- ♦ ID Gauges
- ♦ Concentricity Gauges
- ♦ Optical Gauges
- ♦ Laser Measurement
- ♦ Thickness

► **Physical**

- ♦ Hardness (Durometer)
- ♦ Surface Finish
- ♦ Gloss
- ♦ Tensile
- ♦ Bond
- ♦ Pyrometer
- ♦ Resilience
- ♦ Friction
- ♦ Wear / Abrasion
- ♦ Temperature
- ♦ Rubber Thickness
- ♦ Tension
- ♦ Compression

► **Electrical**

- ♦ Volt Meter
- ♦ Amp Meter
- ♦ Volt / Amp Recorders

- ♦ Power Supplies
- ♦ Amprobe
- ♦ Conductivity
- ♦ Resistivity

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Technical Services & Development

► Testing

- ♦ Tension
- ♦ Compression
- ♦ Environmental
- ♦ Moisture Content
- ♦ Vacuum Filtration
- ♦ Surface Tension
- ♦ Thermal Conductivity
- ♦ Electrical Resistivity
- ♦ Viscosity
- ♦ Resilience
- ♦ Hardness
- ♦ COF
- ♦ Rheology
- ♦ Flow
- ♦ Flexometer
- ♦ PH
- ♦ Refractometers
- ♦ Contact Angle
- ♦ Gloss
- ♦ Chemical Analysis
- ♦ Density
- ♦ Rubber Mixing
- ♦ Sieve Sizer
- ♦ Autoclaves
- ♦ Hydraulic Press
- ♦ Presses

► Prototype

- ♦ Casting
- ♦ Extrusion
- ♦ Compound Mixers
- ♦ Electrostatic Spray
- ♦ Air Spray
- ♦ Grinder
- ♦ Lathe
- ♦ Curing Ovens
- ♦ Inspection
- ♦ Flow Coating

► Compound Development

- ♦ Mixing Mill
- ♦ Internal Mixer

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ATTACHMENT I

Record 1

DIALOG(R) File 516: D & B - DUNS MARKET IDENTIFIERS
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24852314

Ames Rubber Corporation
1440 County Rd 565
Sussex , NJ 07461-3135

Telephone: 973-875-3162
County: Sussex MSA: 5640 (Newark, NJ)
Region: Middle Atlantic

Business: Mfg Fabricated Rubber Products

NAICS Codes: 326299 (All Other Rubber Product Manufacturing)

Primary SIC:
3069 Fabricated rubber products, nec, nsk
30691000 Hard rubber and molded rubber products
Annual Sales Revision Date: 07/22/2007

	Latest Year	Trend	Year	Base	Year
	2005		2003		
Sales (\$)	6,500,000	E	NA	NA	NA
Employees Total	NA		NA	NA	NA
Employees Here	82				
Sales Growth	NA	%			
Net Worth (\$)	NA				
Employment Growth	NA	%			

Square Footage: NA
Number of Accounts: NA

THIS IS:

A MANUFACTURING LOCATION
A BRANCH LOCATION
AN IMPORTER

DUNS Number: 12-514-0699
Headquarter DUNS Number: 00-238-9468 Ames Rubber Corporation
Corporate Family DUNS: 00-238-9468 Ames Rubber Corporation
Regional-Area Management: Stipo, James /Branch Manager

Latest Update to Record: 05/24/07

Record 2

DIALOG(R) File 516: D & B - DUNS MARKET IDENTIFIERS
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20274246

Ames Rubber Corporation

Amesil Division
209 Oak Ridge Rd
Oak Ridge , NJ 07438-8911

Telephone: 973-697-4100
County: Passaic MSA: 0875 (Bergen-Passaic, NJ)
Region: Middle Atlantic

Business: Mfg Silicone Products

NAICS Codes: 331419 (Primary Smelting and Refining of Nonferrous Metal
(except Copper and Aluminum))

Primary SIC:

3339 Primary nonferrous metals, nec

33390304 Silicon, pure

Annual Sales Revision Date: 08/21/2007

	Latest Year	Trend Year	Base Year
--	-------------	------------	-----------

	2005	2003	
--	------	------	--

Sales (\$)	5,500,000 E	NA	NA
------------	-------------	----	----

Employees Total	NA	NA	NA
-----------------	----	----	----

Employees Here	22		
----------------	----	--	--

Sales Growth	NA %		
--------------	------	--	--

Net Worth (\$)	NA		
----------------	----	--	--

Employment Growth	NA %		
-------------------	------	--	--

Square Footage: NA

Number of Accounts: NA

THIS IS:

A MANUFACTURING LOCATION

A DIVISION LOCATION

AN IMPORTER

DUNS Number: 03-538-5801

Headquarter DUNS Number: 00-238-9468 Ames Rubber Corporation

Corporate Family DUNS: 00-238-9468 Ames Rubber Corporation

Vice President: Aulicino, Bob /V Pres

Engineering: Pandori, Michael /Engineering Manager

Latest Update to Record: 06/21/07

Record 3

DIALOG(R) File 516: D & B - DUNS MARKET IDENTIFIERS
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18293513

Ames Rubber Corporation
19 Ames Blvd
Hamburg, NJ 07419-1514

Mailing Address:
P O Box 15240
Newark, NJ 07192

Telephone: 973-827-9101
County: Sussex MSA: 5640 (Newark, NJ)
Region: Middle Atlantic

Business: Mfg Fabricated Rubber Products
NAICS Codes: 326299 (All Other Rubber Product Manufacturing)
Primary SIC:
3069 Fabricated rubber products, nec, nsk
30691300 Rubber rolls and roll coverings
30691400 Rubber automotive products

Latest Year Organized: 1949
State of Incorporation: NJ
Date of Incorporation: 05/26/1949
Annual Sales Revision Date: 02/17/2008

	Latest Year	Trend Year	Base Year
	2006	2004	
Sales (\$)	16,700,000 E	NA	NA
Employees Total	220	220	200
Employees Here	100		
Sales Growth	NA %		
Net Worth (\$)	NA		
Employment Growth	10 %		

Square Footage: 112,700 Owned
Number of Accounts: 100

THIS IS:

A MANUFACTURING LOCATION
A HEADQUARTERS LOCATION
AN ULTIMATE LOCATION
A CORPORATION
AN IMPORTER

DUNS Number: 00-238-9468
Corporate Family DUNS: 00-238-9468 President: Roberts, Charles /Pres
Vice President: Kovach, William /V Pres-Cfo
Vice-Chairman Marvil, Timothy D /V Chm
Marvil, Timothy /V Chm
Chief Financial Officer: Kovach, William /V Pres-Cfo

Latest Update to Record: 05/31/07

ATTACHMENT J

EPA WORK ASSIGNMENT NUMBER: 041-2Z00
EPA CONTRACT NUMBER: 68-W8-0110
EBASCO SERVICES INCORPORATED

ARCS II PROGRAM

FINAL
ENVIRONMENTAL PRIORITIES INITIATIVE/
PRELIMINARY ASSESSMENT (EPI-PA)
AMES RUBBER CORPORATION
WANTAGE
SUSSEX COUNTY, NEW JERSEY
CERCLIS NO.: NJD000818518

SEPTEMBER 1992

NOTICE

THE INFORMATION IN THIS DOCUMENT HAS BEEN FUNDED BY THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA) UNDER ARCS II CONTRACT NO. 68-W8-0110 TO EBASCO SERVICES INCORPORATED (EBASCO). THIS DOCUMENT HAS BEEN FORMALLY RELEASED BY EBASCO TO THE USEPA. THIS DOCUMENT DOES NOT, HOWEVER, REPRESENT USEPA POSITION OR POLICY, AND HAS NOT BEEN FORMALLY RELEASED BY USEPA.

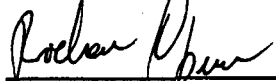
EPA WORK ASSIGNMENT NUMBER: 041-2Z00
EPA CONTRACT NUMBER: 68-W8-0110
EBASCO SERVICES INCORPORATED

ARCS II PROGRAM

FINAL
ENVIRONMENTAL PRIORITIES INITIATIVE/
PRELIMINARY ASSESSMENT (EPI-PA)
AMES RUBBER CORPORATION
WANTAGE
SUSSEX COUNTY, NEW JERSEY
CERCLIS NO.: NJD000818518

SEPTEMBER 1992

SUBMITTED BY:



Richard Opem, E.I.T.
Task Leader
Resource Applications, Inc.

APPROVED BY:



Ming Kuo, Ph.D., P.E.
ARCS II Technical Support Manager
Ebasco Services Incorporated

REVIEWED BY:



Edgar J. Aguado
EPI-PA Site Manager
Ebasco Services Incorporated

SITE SUMMARY AND RECOMMENDATION

The Ames Rubber Corporation (Ames Rubber) site (EPAID Number: NJD000818518) is located on Route 565 in the Township of Wantage, Sussex County, New Jersey, approximately 0.5 mile north of Route 23 (Figure 1). The site is located in a rural, agricultural area of northwestern New Jersey and is not fenced. The site, approximately 10 acres in size, contains two buildings, Building # 2 and Building # 3. Building # 2 is used for facility manufacturing and Building # 3 (west of Building # 2) is used for personnel training and product development. The site terrain consists of rolling hills, and from Building # 2 to Building # 3, there is an approximate 12-foot drop westward. To the east, south, and west of the site are marshes and swamplands. State highway 565 and more wetland area lie to the north. The nearest residence is located 0.3 mile east of the site. Figure 2 depicts a detailed site sketch.

The Ames Rubber Corporation has owned the site and operated there since 1973 to the present. Previously, the Building # 3 portion of the site was vacant. The Building # 2 portion of the site was owned and operated since 1960 by a gunsmith shop. Information on wastes managed was unavailable. At the site, Ames manufactures automobile suspension boots and custom elastomeric-coated metal products for the office and copier industries. In its operations, Ames Rubber uses various solvents, including 1,1,1-trichloroethane, methylene chloride, and methyl ethyl ketone. On-site wastes are generated from the manufacturing of elastomerically-coated metal roller parts for the copier industry. Operations consist of spray painting and cleaning roller parts. Solid waste management units (SWMUs) consist of drum storage areas, former drum storage areas, garbage collection roll-off dumpsters and air emission control devices. Access to the only hazardous waste drum storage area is blocked by a locked fence. The site is well vegetated, with trees and bushes surrounding the eastern and southern edges, and the area north across Route 565. The site is paved outdoors. Both buildings on-site are not connected to any wastewater treatment plant and have septic sewage treatment systems. No air releases have been documented. The facility holds numerous air permits for its spray booth and future dust collection operations. It is unknown if any Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or Resource Conservation and Recovery Act (RCRA) sites exist within a one-mile radius of the site.

SWMUs at the site include the Hazardous Waste Roll-Off Dumpster (SWMU 1), Thermal Oxidizers (SWMU 2), Hazardous Waste Drum Storage Area (SWMU 3), MEK Satellite Accumulation Area (SWMU 4), Methylene Chloride Satellite Accumulation Area (SWMU 5), 1,1,1-Trichloroethane Satellite Accumulation Area (SWMU 6), Former Drum Storage Areas (SWMU 7), and Former Floor Drains (SWMU 8). The Hazardous Waste Roll-Off Dumpster (SWMU 1) has a capacity of approximately 60 cubic yards. Wastes managed are methyl ethyl ketone (MEK), methylene chloride, and 1,1,1-trichloroethane. MEK wastes from paint spray booth operations are emitted from the Thermal Oxidizers (SWMU 2). Spent solvent wastes methylene chloride, MEK, and 1,1,1-trichloroethane are contained in drums at the Hazardous Waste Drum Storage Area (SWMU 3). The area has a capacity of approximately 300 55-gallon drums. The MEK Satellite Accumulation Area (SWMU 4) handles approximately 10 55-gallon drums of spent MEK. Two drums of spent methylene chloride are generated at the Methylene Chloride Satellite Accumulation Area (SWMU 5). The 1,1,1-Trichloroethane Satellite Accumulation Area (SWMU 6) has a capacity of three drums of spent solvent 1,1,1-

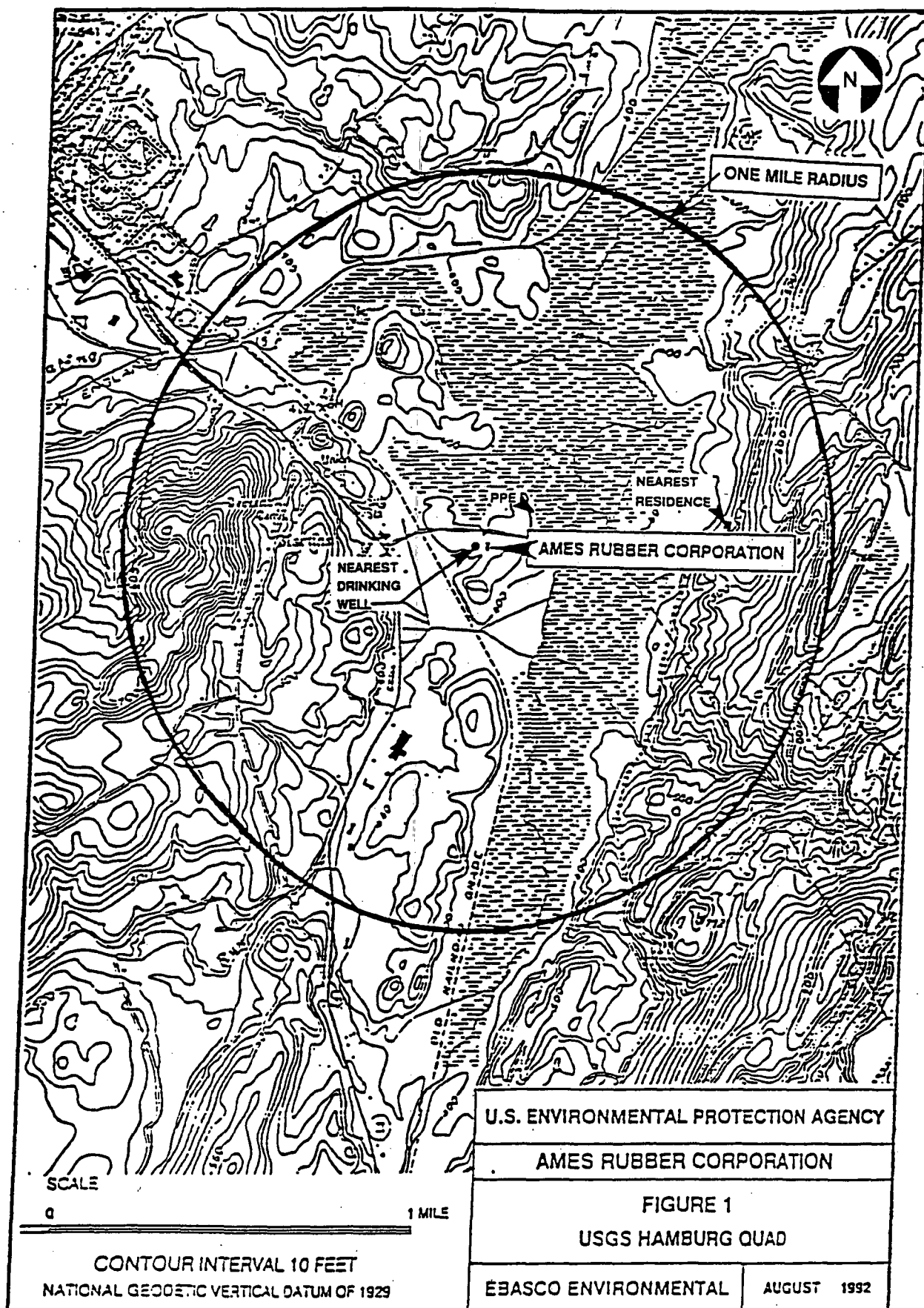
trichloroethane. The Former Drum Storage Areas (SWMU 7) and Former Floor Drains (SWMU 8) are no longer in existence.

On or about July 12, 1984, Ames Rubber sampled one of the site's two drinking water supply wells. The results have indicated that the groundwater under the site was contaminated with pollutants as defined by New Jersey law. The presence of 1,1-dichloroethane, 1,1-dichloroethylene and 1,1,1-trichloroethane was found at a depth of 300 feet in one well. The other well contained 1,1-dichloroethane, 1,1-dichloroethylene, and 1,1,1-trichloroethane at a depth of 96 feet. This discharge was a violation of the New Jersey Water Pollution Control Act. Sample analyses were also performed on a private drinking water well approximately 150 feet northeast of the site. The contaminant 1,1,1-trichloroethane was discovered. Background levels and Environmental Cleanup Responsibility Act (ECRA) levels for these contaminants were unknown. Maximum Contaminant Levels (MCLs) have not been set for these contaminants. As a result of sampling performed at the private well northeast of the site, Ames Rubber had provided bottled water to the household served by the private well as an alternate drinking water source. The house has since been demolished and the residents have relocated. A Phase I investigation including sampling was conducted by Ames Rubber, which resulted in a report submitted to the state on August 1, 1985. Ames Rubber agreed to conduct a remedial investigation and feasibility study (RI/FS) to identify remedial action alternatives for the site. Currently, Ames Rubber is drafting a detailed remedial action plan to the New Jersey Department of Environmental Protection and Energy (NJDEPE) for approval. Monitoring wells are located to the north of Building # 2 (one) and south of Building # 3 (one). These wells were installed as part of a groundwater remediation plan and treatment system currently being required by NJDEPE. According to facility personnel, it is believed that the groundwater contamination could have been caused by the Former Drum Storage Areas (SWMU 7), which may have released the solvent wastes into the groundwater.

Glacial deposits cover bedrock in the area under the site and are tapped by wells. The uppermost deposit beneath the site is of Wisconsinan age, and consists of stratified sand and gravel deposited at the ice margin by meltwater streams. Immediately east of the facility is the margin between these stratified deposits and a discontinuous fill deposit. This consists of unstratified and unsorted boulders and gravel in a matrix of sand, silt, and clay, deposited directly from ice. The Wisconsinan glacial deposits may be underlain by older Jerseyan and Illinoian glacial material. The thickness of glacial deposits varies considerably in the area; the nearest measurement is approximately 0.5 mile west of the facility, where the depth to bedrock is 91 feet.

The Martinsburg hornfels is the source aquifer for 12 wells in Wantage Township. This dark gray, fine-grained metamorphic rock is the result of metamorphism of the Martinsburg Shale by the Beemerville Nepheline Syenite. The hornfels has no primary porosity; groundwater is found in vertical cracks and crevices and yields 5.5 gallons per minute.

Fifteen domestic wells in the region are completed in the Kittatinny Formation, which consists of the Leithsville, Allentown, and Beekmantown rocks. The wells draw on groundwater that occurs in fractures and solution cavities within the limestone and dolomite. Such water is found both under unconfined and semi-artesian conditions. The depth to groundwater is approximately 96 feet at the site. The direction of groundwater flow is to the northeast, toward the Wallkill River. There are approximately 13,577 people residing within a four-mile radius of the site





solvent 1,1,1-trichloroethane. The Former Drum Storage Areas (SWMU 7) and Former Floor Drains (SWMU 8) are no longer in existence.

On or about July 12, 1984, Ames Rubber sampled one of the site's two drinking water supply wells. The results have indicated that the groundwater under the site was contaminated with pollutants as defined by New Jersey law. The presence of 1,1-dichloroethane, 1,1-dichloroethylene and 1,1,1-trichloroethane was found at a depth of 300 feet in one well. The other well contained 1,1-dichloroethane, 1,1-dichloroethylene, and 1,1,1-trichloroethane at a depth of 96 feet. This discharge was a violation of the New Jersey Water Pollution Control Act. Sample analyses were also performed on a private drinking water well approximately 150 feet northeast of the site. The contaminant 1,1,1-trichloroethane was discovered. Background levels and Environmental Cleanup Responsibility Act (ECRA) levels for these contaminants were unknown. Maximum Contaminant Levels (MCLs) have not been set for these contaminants. As a result of sampling performed at the private well northeast of the site, Ames Rubber had provided bottled water to the household served by the private well as an alternate drinking water source. The house has since been demolished and the residents have relocated. A Phase I investigation including sampling was conducted by Ames Rubber, which resulted in a report submitted to the state on August 1, 1985. Ames Rubber agreed to conduct a remedial investigation and feasibility study (RI/FS) to identify remedial action alternatives for the site. Currently, Ames Rubber is drafting a detailed remedial action plan to the New Jersey Department of Environmental Protection and Energy (NJDEPE) for approval. Monitoring wells are located to the north of Building # 2 (one) and south of Building # 3 (one). These wells were installed as part of a groundwater remediation plan and treatment system currently being required by NJDEPE. According to facility personnel, it is believed that the groundwater contamination could have been caused by the Former Drum Storage Areas (SWMU 7), which may have released the solvent wastes into the groundwater.

Glacial deposits cover bedrock in the area under the site and are tapped by wells. The uppermost deposit beneath the site is of Wisconsinan age, and consists of stratified sand and gravel deposited at the ice margin by meltwater streams. Immediately east of the facility is the margin between these stratified deposits and a discontinuous fill deposit. This consists of unstratified and unsorted boulders and gravel in a matrix of sand, silt, and clay, deposited directly from ice. The Wisconsinan glacial deposits may be underlain by older Jerseyan and Illinoian glacial material. The thickness of glacial deposits varies considerably in the area; the nearest measurement is approximately 0.5 mile west of the facility, where the depth to bedrock is 91 feet.

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Fifteen domestic wells in the region are completed in the Kittatinny Formation, which consists of the Leithsville, Allentown, and Beekmantown rocks. The wells draw on groundwater that occurs in fractures and solution cavities within the limestone and dolomite. Such water is found both under unconfined and semi-artesian conditions. The depth to groundwater is approximately 96 feet at the site. The direction of groundwater flow is to the northeast, toward the Wallkill River. There are approximately 13,577 people residing within a four-mile radius of the site

TABLE 1
AMES RUBBER CORPORATION
SAMPLING RESULTS SUMMARY TABLE²
JULY 1984

<u>LOCATION</u>	<u>COMPOUND/ELEMENT</u>	<u>RESULTS¹</u>
Well # 1 (exact location unknown, depth = 300 feet)	1,1-dichloroethane	44
	1,1-dichloroethylene	65
	1,1,1-trichloroethane	580
Well # 2 (exact location unknown, depth = 96 feet)	1,1-dichloroethane	34
	1,1-dichloroethylene	98
	1,1,1-trichloroethane	1,100

(1) Concentration in parts per billion

(2) Ref. No. 12, pp. 1,2

PART IV: HAZARDOUS WASTE ASSESSMENT

GROUNDWATER ROUTE

1. **Describe the likelihood of the release of contaminant(s) to the groundwater as follows: observed release, suspected release, or none. Identify contaminants detected or suspected and provide rationale for attributing them to the site. For observed release, define supporting analytical evidence.**

Review of documented analytical data from NJDEPE involvement at the site indicate that there has been an observed release to the groundwater of inorganic contaminants 1,1,1-trichloroethane, 1,1-dichloroethane, and 1,1-dichloroethylene.

Ref. No. 12, pp.1,2

2. **Describe the aquifer of concern; include information such as depth, thickness, geologic composition, areas of karst terrain, permeability, overlying strata, confining layers, interconnections, discontinuities, depth to water table, groundwater flow direction.**

The glacial deposits cover bedrock in the area under the site. The uppermost deposit beneath the site is of Wisconsinan age, and consists of stratified sand and gravel deposited at the ice margin by meltwater streams. Immediately east of the facility is the margin between these stratified deposits and a discontinuous fill deposit. This consists of unstratified and unsorted boulders and gravel in a matrix of sand, silt, and clay, deposited directly from ice. The Wisconsinan glacial deposits may be underlain by older Jerseyan and Illinoian glacial material. The thickness of glacial deposits varies considerably in the area; the nearest measurement is approximately 0.5 mile west of the facility, where the depth to bedrock is 91 feet.

Beneath the unconsolidated deposits, the uppermost bedrock beneath the facility is of Middle to Upper Ordovician age. The geology in this region of northern New Jersey is complex, consisting of a large number of fairly low-angle thrust faults, which have upthrust slices of Ordovician, Cambrian, and Proterozoic rocks in a northwesterly direction. The faulting event appears to have occurred throughout the early Paleozoic and ceased sometime in the Middle or Upper Ordovician. Beneath the site, the Martinsburg Hornfels occurs in the area as a result of metamorphosis of the Martinsburg shale by the Beemerville Nepheline Syenite. The hornfels is a dense, fine-grained, dark-gray-to-black rock extending about 2,000 feet from the intrinsic body. This unit provides a limited source of groundwater in the region.

The primary aquifer of concern beneath the site is the Martinsburg Formation, of upper to middle Ordovician age. In the vicinity of the site, this unit generally lies at depths of between 10 and 50 feet. In general, the upper part of the Martinsburg formation is medium-to-fine-grained arkosic sandstone or greywacke, with a few lenses of shale and conglomerate. The lower section is mostly banded blue-gray shale and slate. The uppermost rock of this unit beneath the site is gray shale. The static water level in the

which are served by drinking water wells. Approximately 615 people reside within a one-mile radius of the site.

The site surface water flows overland to the east to the Papakating Creek and eventually drains to the Wallkill River, 0.3 mile east from the site. The flow rate of the river is unknown. The Wallkill River is used for fishing. Surface water is not used for drinking purposes within 15 miles downstream of the potential point of entry, as drinking water comes from wells. The site lies outside the 500-year flood plain. Total acreage of wetlands within 15 miles downstream of the potential point of entry is unknown. Approximately 100 acres of wetlands are within one-half mile of the site.

The nearest residence is 0.3 mile to the east of the site on Route 565. On-site workers at Ames Rubber total approximately 115 employees. Total daytime population within a four-mile radius of the site is 13,577. No school/day care facility is within 200 feet of the site property. Based on the 1980 census figures and site reconnaissance house count estimates, there are approximately 500 people residing within a one-mile radius of the site. Wetland sensitive environments exist approximately 200 feet from the site. No recreational parks are adjacent to the site.

Hazardous wastes generated on-site include liquid solvent wastes methyl ethyl ketone (MEK), 1,1,1-trichloroethane, and methylene chloride. Facility wastes contaminated with liquid solvents are also generated and stored on-site. Also, hazardous MEK air emissions are generated from site spray booth operations. As previously stated, Ames Rubber sampled the facility's two potable water wells in 1984. Samples were found to contain the following contamination levels:

Well # 1	1,1-dichloroethane	44*
(exact location	1,1-dichloroethylene	65
unknown,	1,1,1-trichloroethane	580
depth = 300 feet)		
Well # 2	1,1-dichloroethane	34
(exact location	1,1-dichloroethylene	98
unknown,	1,1,1-trichloroethane	100
depth = 96 feet)		

* Concentration in parts per billion.

A non-sampling site reconnaissance was performed on July 28, 1992. Waste source areas observed were in good condition and no evidence of contaminant migration to the site's surrounding wetlands was observed. Monitoring wells are located to the north of Building # 2 (one) and south of Building # 3 (one). These wells were installed as part of a groundwater remediation plan and treatment system currently being required by NJDEPE. The residence, which was located northeast of the site and received bottled water, was no longer in existence during the reconnaissance, and the property was vacant.

In summary, there has been a release of contaminants from the site to groundwater and there is a suspected release to surface water. Based on population estimates, 365 people are potentially exposed to this contamination. The site is in a rural area, but there are residents living 0.3 mile

from the site. No people attend school/day care in the vicinity of the site. No air release is suspected as the site is predominantly paved. Wetland sensitive environments are located adjacent to the site boundaries. Based on the ongoing NJDEPE remediation plan, additional sampling is recommended for wells within four miles of the Ames Rubber Corporation Wantage Plant. Furthermore, it is recommended that downstream sampling of the Wallkill River be performed to verify whether there are contaminants which have migrated to the surface water and are still present.

**SITE ASSESSMENT REPORT: ENVIRONMENTAL PRIORITIES INITIATIVE/
PRELIMINARY ASSESSMENT (EPI-PA)**

PART I: SITE INFORMATION

1. Site Name/Alias Ames Rubber Corporation Wantage Plant
Street Route 565
City Wantage State New Jersey Zip 07461
2. County Sussex County Code 039 Cong. Dist. 5
3. EPA ID No. NJD 000 818 518
4. Block No. 2 Lot No. 60
Block No. 7 Lot No. 7.03
Block No. 7 Lot No. 8
5. Latitude 41°12'30" Longitude 74°35'00"
USGS Quad. Hamburg
6. Owner Ames Rubber Corporation Tel. No. (201) 827-9101
Street 23-47 Ames Boulevard
City Hamburg State New Jersey Zip Code 07419
7. Operator Ames Rubber Corporation Tel. No. (201) 827-9101
Street Route 565
City Wantage State New Jersey Zip Code 07461
8. Type of Ownership
☒ Private ☐ Federal ☐ State
☐ County ☐ Municipal ☐ Unknown ☐ Other

9. Owner/Operator Notification on File

☒ RCRA 3001 Date: 11/80 ☐ CERCLA 103C Date: _____

☐ None

☐ Unknown

10. Permit Information

Permit	Pr.No.	Date Issued	Date	Comments
<u>Time. Grinder # 1064</u>	<u>085191</u>	_____	<u>092691</u>	<u>Deleted</u>
<u>Time. Grinder # 1063</u>	<u>085191</u>	_____	<u>092691</u>	<u>Deleted</u>
<u>Wk. in Oven # 910-5</u>	<u>086101</u>	_____	<u>082592</u>	<u>Temporary</u>
<u>Collector # 955</u>	<u>012721</u>	_____	<u>052295</u>	<u>Permanent</u>
<u>Wk. in Oven # 910-4</u>	<u>052016</u>	_____	<u>111291</u>	<u>Permanent</u>
<u>Solv.Mixing Vent # 1</u>	<u>047691</u>	_____	<u>033096</u>	<u>Permanent</u>
<u>Rep. Press # 299</u>	<u>047690</u>	_____	<u>111692</u>	<u>Deleted</u>
<u>Rep. Press # 297</u>	<u>047688</u>	_____	<u>111692</u>	<u>Deleted</u>
<u>Press # 298A, hood</u>	<u>069318</u>	_____	<u>081392</u>	<u>Deleted</u>
<u>Press # 294 & hood</u>	<u>069316</u>	_____	<u>081392</u>	<u>Deleted</u>
<u>Rep. Press 293</u>	<u>069315</u>	_____	<u>081392</u>	<u>Deleted</u>
<u>Rep. Press 292</u>	<u>069314</u>	_____	<u>081392</u>	<u>Deleted</u>
<u>Press 295 & hood</u>	<u>077287</u>	_____	<u>022892</u>	<u>Deleted</u>
<u>Rotoclone Coll Vent</u>	<u>044740</u>	_____	<u>122592</u>	<u>Permanent</u>
<u>Elect. Oven # 910-6</u>	<u>077594</u>	_____	<u>033092</u>	<u>Permanent</u>
<u>Gehn. Oven # 910-3</u>	<u>081219</u>	_____	<u>032494</u>	<u>Deleted</u>
<u>Boiler</u>	<u>008639</u>	_____	<u>011694</u>	<u>Permanent</u>
<u>Elect. Oven # 906-2</u>	<u>012733</u>	_____	<u>080894</u>	<u>Permanent</u>

<u>Gehn. Oven # 910-2</u>	<u>082622</u>	<u>082622</u>	<u>Deleted</u>
<u>Walk in Oven # 1148</u>	<u>096715</u>	<u>082492</u>	<u>Temporary</u>
<u>Rotoclone # 1072</u>	<u>086102</u>	<u>061391</u>	<u>Deleted</u>
<u>Elect. Oven # 906-1</u>	<u>012732</u>	<u>080894</u>	<u>Permanent</u>
<u>Mac. Blaster # 939</u>	<u>077065</u>	<u>021493</u>	<u>Permanent</u>
<u>Rep. Press # 296</u>	<u>047687</u>	<u>033091</u>	<u>Deleted</u>
<u>Elect. Oven # 1094</u>	<u>094449</u>	<u>051294</u>	<u>Permanent</u>
<u>Elect. Oven # 1095</u>	<u>094448</u>	<u>051294</u>	<u>Permanent</u>
<u>Pad Painter 1@2</u>	<u>093832</u>	<u>012692</u>	<u>Temporary</u>
<u>Oxidizer Stack # 1</u>	<u>096038</u>	<u>092792</u>	<u>Temporary</u>
<u>Rep. Press # 298</u>	<u>095318</u>	<u>081692</u>	<u>Temporary</u>
<u>Grinder # 993-1A</u>	<u>099766</u>	<u>102992</u>	<u>Temporary</u>
<u>Sander # 993-4A</u>	<u>099765</u>	<u>102992</u>	<u>Temporary</u>
<u>Sander # 993-2A</u>	<u>099767</u>	<u>959282</u>	<u>Temporary</u>
<u>Weigh Station # 2A</u>	<u>099762</u>	<u>111196</u>	<u>Permanent</u>
<u>Rotoclone # 1072</u>	<u>100003</u>	<u>110592</u>	<u>Temporary</u>
<u>Low Pressure Boiler</u>	<u>098146</u>	<u>092995</u>	<u>Permanent</u>
<u>Holamatic # 454</u>	<u>077593</u>	<u>032493</u>	<u>Permanent</u>
<u>Elect. Oven # 906-11</u>	<u>083097</u>	<u>020293</u>	<u>Permanent</u>
<u>Gehn. Oven # 900-2</u>	<u>078735</u>	<u>011793</u>	<u>Deleted</u>
<u>Ovens # 904-3-6-7906</u>			
<u>-3-4-5-9-10</u>	<u>078614</u>	<u>031493</u>	<u>Deleted</u>
<u>Want.Degreas. # 954</u>	<u>081943</u>	<u>021095</u>	<u>Permanent</u>
<u>Rep. Press # 1071</u>	<u>085845</u>	<u>021695</u>	<u>Permanent</u>

<u>PC Oven # 906-9-10</u>	<u>041073</u>	<u>050691</u>	<u>Permanent</u>
<u>Oven # 910-3, hood</u>	<u>100115</u>	<u>120991</u>	<u>Temporary</u>
<u>Oven # 910-2, hood</u>	<u>100116</u>	<u>120991</u>	<u>Temporary</u>
<u>Oven # 910-2, hood</u>	<u>100116</u>	<u>091091</u>	<u>Temporary</u>
<u>Water</u>	<u>NJ0098639</u>		<u>Active</u>
<u>Haz Waste Generator</u>	<u>NJD000818518</u>		<u>Active</u>

11. Site Status

☒ Active ☐ Inactive ☐ Unknown

12. Years of Operation: 1/1/73 to present

13. Identify the types of waste sources (e.g., landfill, surface impoundment, piles, stained soil, above or below-ground tanks or containers, land treatment, etc.) on site. Initiate as many waste unit numbers as needed to identify all waste sources on site.

(a) Waste Sources

<u>Waste Unit No.</u>	<u>Waste Source Type</u>	<u>Facility Name for Unit</u>
1.	<u>Containers</u>	Hazardous Waste Roll-Off Dumpster
2.	<u>Emission control</u>	Thermal Oxidizers
3.	<u>Drums</u>	Hazardous Waste Drum Storage Area
4.	<u>Drums</u>	MEK Satellite Accumulation Area
5.	<u>Drums</u>	Methylene Chloride Satellite Accumulation Area
6.	<u>Drums</u>	1,1,1 - TCE Satellite Accumulation Area
7.	<u>Drums</u>	Former Drum Storage Areas
8.	<u>Piping</u>	Former Floor Drains

(b) Other Areas of Concern

Identify any miscellaneous spills, dumping, etc. on-site; describe the materials and identify their locations on-site.

None.

14. Information available from

Contact: Luz Martinez Agency: U.S.EPA Tel.No.: (212) 264-4561

Preparer: Richard Opem Agency: Resource Applications, Inc.

Date: 8/21/92

PART II: WASTE SOURCE INFORMATION (For RCRA Solid Waste Management Units {SWMUs})

For each of the waste units identified in Part I, complete the following items.

Waste Unit (No.)	(Facility Name for Unit)
1	Hazardous Waste Roll-off Dumpster
1.	<p>Identify the RCRA status and permit history, if applicable, and the age of the SWMU.</p> <p>This unit stores hazardous waste on-site for a period of less than 90 days; therefore, it is not regulated. The unit has been in operation since 1980.</p>
2.	<p>Describe the SWMU and clearly identify its location on a site map.</p> <p>The dumpster receives solvent-contaminated facility solid wastes generated from the cleaning of equipment. The materials are predominantly rags and wipers. The unit is located west of Building # 2, adjacent to the southwest corner of the parking lot.</p>
3.	<p>Identify the size or quantity of the waste (e.g., area or volume of a landfill or surface impoundment, number and capacity of drums, or tanks). Specify the quantity of hazardous substances in the waste unit.</p> <p>The steel dumpster is approximately 7 feet high, 8 feet wide and 30 feet long. Capacity is approximately 60 cubic yards.</p>
4.	<p>Identify the physical state(s) of the waste(s) as disposed of in the SWMU. The physical state(s) should be categorized as follows: solid, powder or fines, sludge, slurry, liquid or gas.</p> <p>The physical state of the waste is solid.</p>
5.	<p>Identify specific hazardous substances(s) known or suspected to be present in the SWMU.</p> <p>The hazardous substances present in the unit are methyl ethyl ketone (MEK), methylene chloride, and 1,1,1-trichloroethane.</p>
6.	<p>Describe the containment of the SWMU unit as it relates to releases to groundwater, surface water, soil and air.</p> <p>The unit rests on a paved surface and is covered by a tarpaulin which is hooked to the sides.</p>

SWMU-specific Conclusion:

No release of hazardous substances is known, alleged, or suspected to have occurred from this SWMU.

Ref. No. 2

PART II: WASTE SOURCE INFORMATION (For RCRA Solid Waste Management Units {SWMUs})

For each of the waste units identified in Part I, complete the following items.

Waste Unit (No.)

(Facility Name for Unit)

2

Thermal Oxidizers

1. **Identify the RCRA status and permit history, if applicable, and the age of the SWMU.**

The oxidizers are not RCRA-regulated, but emissions are controlled by the facility's air permits for the unit.

2. **Describe the SWMU and clearly identify its location on a site map.**

The two oxidizers are made of cast metal and stand approximately 60 feet high. Emissions treated are generated from the site paint spray booth operations. The unit is located adjacent to the southern wall of Building # 2, in the eastern portion of the site.

3. **Identify the size or quantity of the waste (e.g., area or volume of a landfill or surface impoundment, number and capacity of drums, or tanks). Specify the quantity of hazardous substances in the waste unit.**

The quantity of wastes emitted by the oxidizers is unknown.

4. **Identify the physical state(s) of the waste(s) as disposed of in the SWMU. The physical state(s) should be categorized as follows: solid, powder or fines, sludge, slurry, liquid or gas.**

The physical states of the waste are liquid and powder.

5. **Identify specific hazardous substances(s) known or suspected to be present in the SWMU.**

The hazardous substance present in the unit is methyl ethyl ketone (MEK).

6. **Describe the containment of the SWMU unit as it relates to releases to groundwater, surface water, soil and air.**

The unit rests on a paved surface and was in good condition during the reconnaissance.

SWMU-specific Conclusion:

No release of hazardous substances is known, alleged, or suspected to have occurred from this SWMU.

Ref. No. 2

PART II: WASTE SOURCE INFORMATION (For RCRA Solid Waste Management Units {SWMUs})

For each of the waste units identified in Part I, complete the following items.

Waste Unit (No.)

(Facility Name for Unit)

3

Hazardous Waste Drum Storage Area

1. **Identify the RCRA status and permit history, if applicable, and the age of the SWMU.**

This unit stores hazardous waste on-site for a period of less than 90 days; therefore, it is not regulated. The unit has been in operation since 1980.

2. **Describe the SWMU and clearly identify its location on a site map.**

The fenced, locked, storage area receives drummed liquid hazardous wastes from the Satellite Accumulation Areas (SWMUs 4-6) in the main process areas of Building # 2. The unit is located in the south-central portion of the site, west of the Hazardous Waste Roll-Off Dumpster (SWMU 1).

3. **Identify the size or quantity of the waste (e.g., area or volume of a landfill or surface impoundment, number and capacity of drums, or tanks). Specify the quantity of hazardous substances in the waste unit.**

The storage area is approximately 60 feet by 45 feet in size. The capacity of wastes handled is approximately 300 55-gallon drums.

4. **Identify the physical state(s) of the waste(s) as disposed of in the SWMU. The physical state(s) should be categorized as follows: solid, powder or fines, sludge, slurry, liquid or gas.**

The physical state of the waste is liquid.

5. **Identify specific hazardous substances(s) known or suspected to be present in the SWMU.**

The hazardous substances present in the unit are spent solvents methylene chloride, methyl ethyl ketone (MEK), and 1,1,1-trichloroethane. Some non-hazardous product drums are stored in the northern portion of the unit.

6. **Describe the containment of the SWMU unit as it relates to releases to groundwater, surface water, soil and air.**

The waste drums rest on wooden pallets, which rest on a concrete pad. However, in the southern portion of the unit, some pallets rest on gravel and bare soil.

SWMU-specific Conclusion:

No release of hazardous substances is known, alleged, or suspected to have occurred from this SWMU.

Ref. No. 2

PART II: WASTE SOURCE INFORMATION (For RCRA Solid Waste Management Units {SWMUs})

For each of the waste units identified in Part I, complete the following items.

Waste Unit (No.)

(Facility Name for Unit)

4

MEK Satellite Accumulation Area

1. **Identify the RCRA status and permit history, if applicable, and the age of the SWMU.**

This storage area is not regulated since wastes are stored less than 90 days. The unit has been in operation since the 1980s.

2. **Describe the SWMU and clearly identify its location on a site map.**

The storage area collects solid and liquid hazardous wastes from the site painting, parts cleaning and degreasing operations in the main process areas of Building # 2. The unit is located in the south-central portion of Building # 2, adjacent to the paint spray booth.

3. **Identify the size or quantity of the waste (e.g., area or volume of a landfill or surface impoundment, number and capacity of drums, or tanks). Specify the quantity of hazardous substances in the waste unit.**

The storage area is approximately 6 feet by 20 feet in size. The capacity of wastes handled is approximately 10 55-gallon drums.

4. **Identify the physical state(s) of the waste(s) as disposed of in the SWMU. The physical state(s) should be categorized as follows: solid, powder or fines, sludge, slurry, liquid or gas.**

The physical states of the wastes are liquid and solid.

5. **Identify specific hazardous substances(s) known or suspected to be present in the SWMU.**

The hazardous substance present in the unit is spent solvent methyl ethyl ketone (MEK).

6. **Describe the containment of the SWMU unit as it relates to releases to groundwater, surface water, soil and air.**

The waste drums rest on wooden pallets, which are resting on a concrete floor.

SWMU-specific Conclusion:

No release of hazardous substances is known, alleged, or suspected to have occurred from this SWMU.

Ref. No. 2

PART II: WASTE SOURCE INFORMATION (For RCRA Solid Waste Management Units {SWMUs})

For each of the waste units identified in Part I, complete the following items.

Waste Unit (No.)

(Facility Name for Unit)

5

Methylene Chloride Satellite Accumulation Area

1. **Identify the RCRA status and permit history, if applicable, and the age of the SWMU.**

This storage area is not regulated since wastes are stored less than 90 days. The unit has been in operation since the 1980s.

2. **Describe the SWMU and clearly identify its location on a site map.**

The storage area collects solid and liquid hazardous wastes from the cleaning and degreasing operations in the main process areas of Building # 2. The unit is located in the northwest portion of Building # 2.

3. **Identify the size or quantity of the waste (e.g., area or volume of a landfill or surface impoundment, number and capacity of drums, or tanks). Specify the quantity of hazardous substances in the waste unit.**

The storage area is approximately 3 feet by 6 feet in size. The capacity of wastes accumulated is two 55-gallon drums.

4. **Identify the physical state(s) of the waste(s) as disposed of in the SWMU. The physical state(s) should be categorized as follows: solid, powder or fines, sludge, slurry, liquid or gas.**

The physical states of the wastes are liquid and solid.

5. **Identify specific hazardous substances(s) known or suspected to be present in the SWMU.**

The hazardous substance present in the unit is spent solvent methylene chloride.

6. **Describe the containment of the SWMU unit as it relates to releases to groundwater, surface water, soil and air.**

The waste drums rest on wooden pallets, which are resting on a concrete floor.

SWMU-specific Conclusion:

No release of hazardous substances is known, alleged, or suspected to have occurred from this SWMU.

Ref. No. 2

PART II: WASTE SOURCE INFORMATION (For RCRA Solid Waste Management Units {SWMUs})

For each of the waste units identified in Part I, complete the following items.

Waste Unit (No.)

(Facility Name for Unit)

6

1,1,1-Trichloroethane Satellite
Accumulation Area

- 1. Identify the RCRA status and permit history, if applicable, and the age of the SWMU.**

This storage area is not regulated since wastes are stored less than 90 days. The unit has been in operation since the 1980s.

- 2. Describe the SWMU and clearly identify its location on a site map.**

The storage area collects solid and liquid hazardous wastes from the cleaning and degreasing operations in the main process areas of Building # 2. The unit is located in the northeast portion of Building # 2.

- 3. Identify the size or quantity of the waste (e.g., area or volume of a landfill or surface impoundment, number and capacity of drums, or tanks). Specify the quantity of hazardous substances in the waste unit.**

The storage area size is approximately 4 feet by 8 feet in size. The capacity of wastes handled is three 55-gallon drums.

- 4. Identify the physical state(s) of the waste(s) as disposed of in the SWMU. The physical state(s) should be categorized as follows: solid, powder or fines, sludge, slurry, liquid or gas.**

The physical states of the wastes are liquid and solid.

- 5. Identify specific hazardous substances(s) known or suspected to be present in the SWMU.**

The hazardous substance present in the unit is spent solvent 1,1,1-trichloroethane.

- 6. Describe the containment of the SWMU unit as it relates to releases to groundwater, surface water, soil and air.**

The waste drums rest on wooden pallets, which are resting on a concrete floor.

SWMU-specific Conclusion:

No release of hazardous substances is known, alleged, or suspected to have occurred from this SWMU.

Ref. No. 2

PART II: WASTE SOURCE INFORMATION (For RCRA Solid Waste Management Units {SWMUs})

For each of the waste units identified in Part I, complete the following items.

Waste Unit (No.)

(Facility Name for Unit)

7

Former Drum Storage Areas

1. **Identify the RCRA status and permit history, if applicable, and the age of the SWMU.**

This former storage area is not regulated. The unit has been out of operation since the mid-1980s.

2. **Describe the SWMU and clearly identify its location on a site map.**

The storage areas collected solid and liquid hazardous wastes from the site manufacturing operations in the main process areas of Building # 2. Locations of the areas are unknown and the facility personnel were unable to provide information as to the former locations.

3. **Identify the size or quantity of the waste (e.g., area or volume of a landfill or surface impoundment, number and capacity of drums, or tanks). Specify the quantity of hazardous substances in the waste unit.**

The former storage area sizes are unknown.

4. **Identify the physical state(s) of the waste(s) as disposed of in the SWMU. The physical state(s) should be categorized as follows: solid, powder or fines, sludge, slurry, liquid or gas.**

The physical state of the wastes was liquid.

5. **Identify specific hazardous substances(s) known or suspected to be present in the SWMU.**

The hazardous substances present in the unit were spent solvents 1,1,1-trichloroethane, methylene chloride, and methyl ethyl ketone (MEK).

6. **Describe the containment of the SWMU unit as it relates to releases to groundwater, surface water, soil and air.**

How the waste drums were contained is unknown. Facility personnel were unable to provide information.

SWMU-specific Conclusion:

It is not known nor has it been determined by the NJDEPE whether the site groundwater contamination occurred from a release from this unit. Not enough information is known at this time to make that determination.

Ref. No. 2

PART II: WASTE SOURCE INFORMATION (For RCRA Solid Waste Management Units {SWMUs})

For each of the waste units identified in Part I, complete the following items.

Waste Unit (No.)

(Facility Name for Unit)

8

Former Floor Drains

- 1. Identify the RCRA status and permit history, if applicable, and the age of the SWMU.**

This former piping system is not regulated. The unit has been out of operation since the mid-1980s.

- 2. Describe the SWMU and clearly identify its location on a site map.**

The piping system collected industrial process wastewater from the site manufacturing operations in the main process areas of Building # 2. The system was located throughout the building.

- 3. Identify the size or quantity of the waste (e.g., area or volume of a landfill or surface impoundment, number and capacity of drums, or tanks). Specify the quantity of hazardous substances in the waste unit.**

The quantities of process wastewater generated are unknown.

- 4. Identify the physical state(s) of the waste(s) as disposed of in the SWMU. The physical state(s) should be categorized as follows: solid, powder or fines, sludge, slurry, liquid or gas.**

The physical state of the wastes was liquid.

- 5. Identify specific hazardous substances(s) known or suspected to be present in the SWMU.**

The hazardous substances present in the unit were spent solvents 1,1,1-trichloroethane, methylene chloride, and methyl ethyl ketone (MEK).

- 6. Describe the containment of the SWMU unit as it relates to releases to groundwater, surface water, soil and air.**

The floor drains were located on concrete flooring and the piping system was contained underground.

SWMU-specific Conclusion:

It is not known nor has it been determined by the NJDEPE whether the site groundwater contamination occurred from a release from this unit. Not enough information is known at this time to make that determination.

Ref. No. 2

PART III: PREVIOUS INVESTIGATIONS

EXISTING ANALYTICAL DATA

As previously stated, Ames Rubber sampled the site's two drinking water supply wells in 1984. Sample results are shown in Table 1.

Analyses were also performed on a private drinking water well approximately 150 feet northeast of the site. 1,1,1-trichloroethane contamination was discovered. As a result, Ames Rubber had provided bottled water to the household served by the private well as an alternate drinking water source. The house has since been demolished and the residents have relocated. A Phase I investigation including sampling was conducted by Ames Rubber, which resulted in a report submitted to the state on August 1, 1985. Ames Rubber agreed to conduct a remedial investigation and feasibility study (RI/FS) of remedial action alternatives for the site. Currently, Ames Rubber is drafting a detailed remedial action plan to NJDEPE for approval. Monitoring wells are located to the north of Building # 2 (one) and south of Building # 3 (one). These wells were installed as part of a groundwater remediation plan and treatment system currently being required by NJDEPE.

SITE RECONNAISSANCE RESULTS

A site reconnaissance was performed on July 28, 1992 to document existing site conditions, note the locations and conditions of the buildings, and observe the locations of all potential source areas of contamination. No sampling was conducted. The site property was observed during the reconnaissance as well as the indoor process areas. The manufacturing processes were inactive due to an annual two-week shutdown period for maintenance and inventory. Workers were not on-site. Facility housekeeping was in good order at all process and waste management areas. The presence of the Thermal Oxidizers (SWMU 2) was noted as this was not contained in state file material.

The 10-acre site contains two buildings, Building # 2 and Building # 3. Building # 2 is used for manufacturing and Building # 3 (west of Building # 2) is used for personnel training and product development. The site terrain consists of rolling hills. To the east, south, and west of the site are marshes and swamplands. State Highway 565 and wetland area lie to the north. The nearest residence is located 0.5 mile northwest of the site. Site surface water flows overland to the east and eventually drains to the Wallkill River 0.3 mile from the site.

On-site wastes are generated from the manufacturing of elastomerically-coated metal roller parts for the copier industry. Operations consist of spray painting and cleaning roller parts. Solid waste management units (SWMUs) consist of drum storage areas, hazardous waste collection roll-off dumpsters and air emission control devices. Monitoring wells are located to the north of Building # 2 (one) and south of Building # 3 (one). These wells were installed as part of a groundwater remediation plan and treatment system currently being required by NJDEPE. There have been no reports of any abnormal illnesses by employees since the occupation of Ames Rubber in these buildings.

While accomplishing the site investigation, there was no evidence of any surficial soil contamination, nor were there any discolorations on the asphalt. The marshy wetland areas surrounding the site were surveyed and there was no evidence of any contaminant migration from surface water. Photographs taken during the reconnaissance are presented in Appendix A.

on-site wells is approximately 40 feet. The on-site wells yield up to 4.5 gallons per minute. Groundwater flow is toward the east. The Martinsburg Formation has no primary porosity or permeability; nearly all groundwater is contained in fractures. The most successful wells occur in the weathered zone, within 200 feet of the surface. Yields in the Martinsburg Formation average 10 gallons per minute.

Fifteen domestic wells in the region are completed in the Kittatinny Formation, which consists of the Leithsville, Allentown, and Beekmantown rocks. The wells draw on groundwater that occurs in fractures and solution cavities within the limestone and dolomite. Such water is found both under unconfined and semi-artesian conditions.

Ref. No. 13

3. Is a designated well head protection area within 4 miles of the site?

Since the state wellhead protection areas are designated for the protection of drinking water from public water supply wells, there are no designated well head protection areas within four miles of the site.

Ref. No. 16

4. What is the depth from the lowest point of waste disposal/storage to the highest seasonal level of the saturated zone of the aquifer of concern?

The lowest point of waste disposal/storage on-site is at ground level. The depth to the aquifer of concern is approximately 96 feet and could possibly be lower, but static water levels in the on-site wells are unknown. Therefore, the distance is approximately 96 feet.

Ref. No. 12, pp. 1,2

5. What is the permeability value of the least permeable intervening stratum between the ground surface and the aquifer of concern?

The intervening material between the aquifer of concern and the ground surface consists of sand and gravel deposits, and some till. Thus, the least permeable material is the glacial till, with an approximate value of 1.8×10^{-3} cm/sec.

Ref. No. 10

6. What is the net precipitation for the area?

The net precipitation for this area is 13 inches per year, based on observations from Newton, NJ and a mean annual lake evaporation rate of 31 inches.

Ref. No. 14

7. What is the distance to and depth of the nearest well that is currently used for drinking purposes?

There are two wells directly on-site that are currently used for drinking purposes. One well is 300 feet deep, the other is 96 feet deep.

Ref. No. 6, Ref. No. 12.

8. If a release to groundwater is observed or suspected, determine the number of people that obtain drinking water from wells that are documented or suspected to be located within the contaminated boundary of release.

Since groundwater flow is northeast towards the Wallkill River, it is estimated that the contaminated boundary of release extends northeast to the Wallkill River, approximately 0.3 mile from the site. Approximately 365 people are served by wells in this area.

Ref. No. 2, Ref. No. 3, Ref. No. 13

9. Identify the population served by wells located within 4 miles of the site that draw from the aquifer of concern.

<u>Distance</u>	<u>Population</u>
0-1/4 mi	115
>1/4-1/2 mi	250
>1/2-1 mi	250
>1-2 mi	5,410
>2-3 mi	4,086
>3-4 mi	3,466

Ref. No. 2, Ref. No. 3

10. Identify uses of groundwater within 4 miles of the site (i.e. private drinking sources, municipal sources, commercial, irrigation, unusable).

All wells within four miles of the site are used for drinking water purposes. There are two wells within 500 feet of the site, approximately 20 wells within a one-mile radius, and over 300 wells in a four-mile radius from the site.

Ref. No. 4

SURFACE WATER ROUTE

11. **Describe the likelihood of a release of contaminant(s) to surface water as follows: observed release, suspected release, or none. Identify contaminants detected or suspected and provide a rationale for attributing them to the site. For observed release, define the supporting analytical evidence.**

The viable route to surface water is east towards the Wallkill River, approximately 0.3 mile from the site. Based on groundwater flow and the observed groundwater release, a release to surface water is suspected.

Ref. No. 2, Ref. No. 12

12. **Identify the nearest downslope surface water. If possible, include a description of possible surface drainage patterns from the site.**

The nearest downslope surface water body is Papakating Creek, which is a tributary to the Wallkill River. The surface drainage pattern from the facility to Papakating Creek is to the east.

Ref. No. 1

13. **What is the distance to the nearest downslope surface water? Measure the distance along a course that runoff can be expected to follow.**

The distance to the nearest downslope surface water body, Papakating Creek, is approximately 1,900 feet.

Ref. No. 1

14. **Define the floodplain that the site is located within.**

Based upon flood zone map no. 3405620030A, the site lies in Zone C, outside the 500-year flood plain.

Ref. No. 7

15. **What is the two-year 24-hour rainfall?**

The two-year 24-hour rainfall is 2.27 inches.

Ref. No. 14

16. Identify drinking water intakes in surface waters within 15 miles downstream of the site. For each intake, identify the distance from the point of surface water entry, population served, and stream flow at the intake location.

<u>Intake</u>	<u>Distance</u>	<u>Population Served</u>	<u>Flow (cfs)</u>
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There are no drinking water intakes in surface waters within 15 miles downstream of the potential point of entry.

Ref. No. 4

17. Identify fisheries that exist within 15 miles downstream of the point of surface water entry. For each sensitive environment, specify the following:

<u>Fishery</u>	<u>Water Body Type</u>	<u>Flow (cfs)</u>
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Wallkill River	River	Unknown
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Ref. No. 2

18. Identify sensitive environments that exist within 15 miles of the point of surface water entry. For each sensitive environment specify the following:

<u>Environment</u>	<u>Water Body Type</u>	<u>Flow (cfs)</u>
--------------------	------------------------	-------------------

Wetlands	Marsh	Unknown
Wallkill River	River	Unknown
Papakating Creek	Stream	Unknown

Ref. No. 2

19. If release to surface water is observed or suspected, identify any intakes, fisheries, and sensitive environments from question Nos. 16-18 that are or may be located within the contamination boundary of the release.

<u>Intake</u>	<u>Fishery</u>	<u>Environment</u>
---------------	----------------	--------------------

None	Wallkill River	Wetlands
------	----------------	----------

Ref. No. 2

SOIL EXPOSURE PATHWAY

20. Determine the number of people that occupy residence or attend school or day care on or within 200 feet of the site property.

There are no residences, schools or day care centers within 200 feet of the site property.

Ref. No. 2

21. Determine the number of people that work on or within 200 feet of the site property.

Approximately 115 people are employed by the Ames Rubber Wantage plant.

Ref. No. 2

22. Identify terrestrially-sensitive environments on or within 200 feet of the site property.

There are no terrestrial sensitive environments within 200 feet of the site.

Ref. No. 5

AIR ROUTE

23. Describe the likelihood of release of contaminants to air as follows: observed release, suspected release, or none. Identify contaminants detected or suspected, and provide a rationale for attributing them to the site. For observed release, define the supporting analytical evidence.

Eight years ago the discharge of contaminants was to the groundwater. There was no evidence of air release during the reconnaissance, and a release to air is not suspected.

Ref. No. 2, Ref. No. 12, pp. 1,2

24. Determine populations that reside within 4 miles of the site.

<u>Distance</u>	<u>Population</u>
0-1/2 mi	115
>1/4-1/2 mi	250
>1/2-1 mi	250
>1-2 mi	5,410
>2-3 mi	4,086
>3-4 mi	3,466

Ref. No. 3

25. Identify sensitive environments and wetlands acreage within ½ mile of the site.

<u>Sensitive Environment</u>	<u>Type</u>	<u>Distance</u>
Wetlands	River	1,000 feet
Wallkill River	River	1,600 feet
Papakating Creek	Stream	1,900 feet

There are approximately 100 acres of wetlands within a one-half mile radius of the site.

Ref. No. 15, Ref. No. 1

26. If a release to air is observed or suspected, determine the number of people that reside or are suspected to reside within the area of the air contamination from the release.

No release to air is suspected.

Ref. No. 2, Ref. No. 12, pp.1,2

27. If a release to air is observed or suspected, identify any sensitive environments, listed in question No. 25, that are or may be located within the area of air contamination from the release.

No release to air is suspected.

Ref. No. 2, Ref. No. 12, pp.1,2





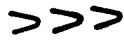








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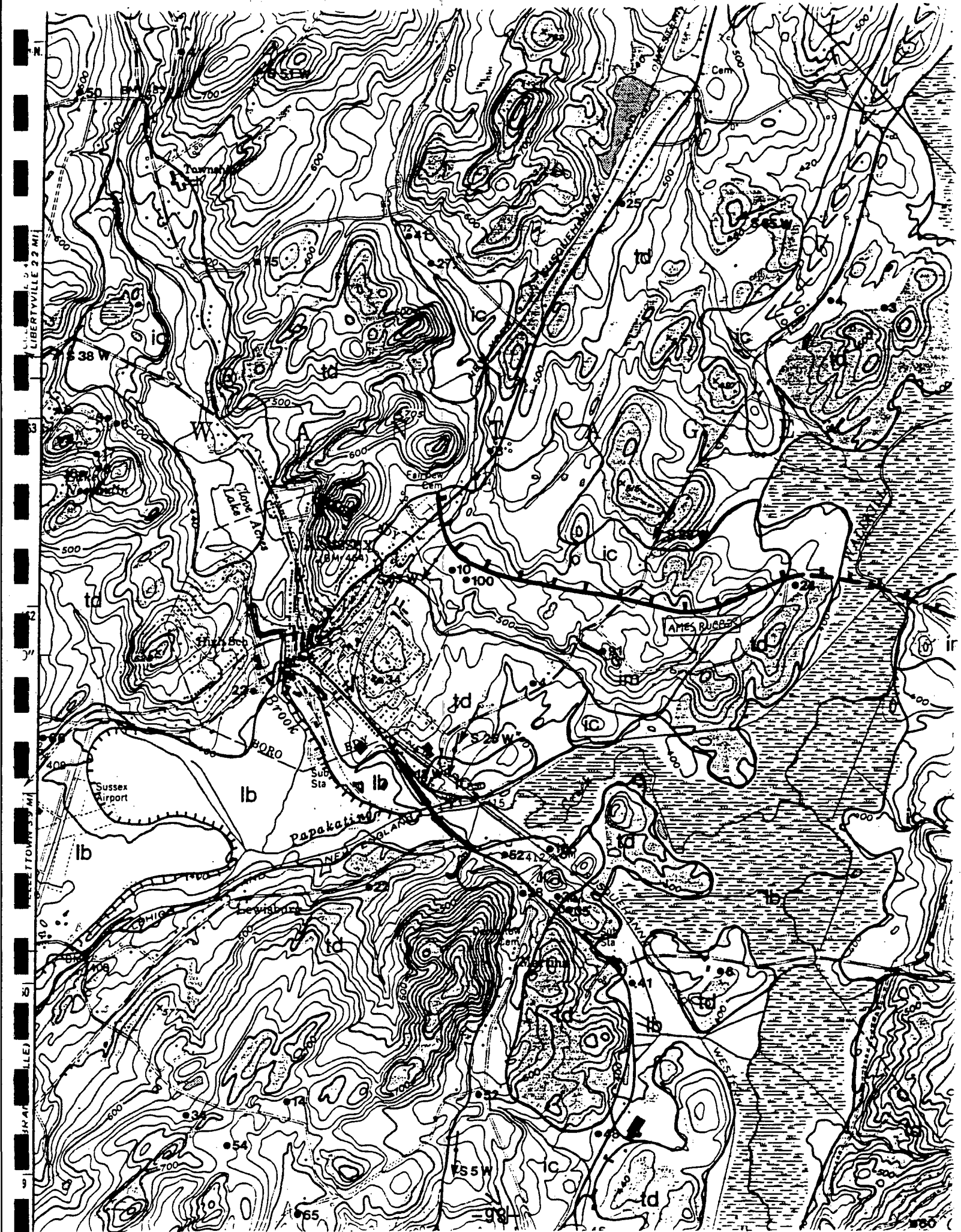
JERSEY
Governor
MENTAL PROTECTION
Commissioner
RESOURCES
E., Director

DESCRIPTION OF MAP UNITS					
UNIT	SUBUNIT	MAP SYMBOL	MATERIAL	LANDFORM AND OCCURRENCE	GROUND WATER POTENTIAL
till	discontinuous till	td	Unstratified and unsorted boulders and gravel in a matrix of mixed sand, silt, and clay. Deposited directly from ice. Matrix is generally sandier on uplands than in valleys.	Patches of till resting directly on bedrock. Deposits are up to 100 feet thick, but thickness varies considerably within short distances. In valleys, till may be encountered in the subsurface beneath stratified sediment or lake-bottom sediment.	Deposits of till are generally poor aquifers because they are comparatively impermeable and thin. Sandy tills in valley bottoms may, in places, provide domestic water supplies.
	continuous till	tc	As above.	Continuous blanket of till covering the bedrock surface. Thickness generally is greater than ten feet and ranges up to 100 feet. In valleys, till may be encountered in the subsurface beneath stratified sediment or lake-bottom sediment.	As above.
stratified sediment	ice-marginal stratified sediment	im	Stratified sand and gravel. Sorting generally is good and stratification generally is continuous and undeformed.	Broad, flat-topped delta ridges that extend across valleys. Deposits are up to 200 feet thick, but thickness varies greatly within short distances due to irregularities of the bedrock surface.	Stratified sediment in valley bottom is the most productive glacial aquifer because it is generally permeable, thick, continuous, and extensive. Deposits in hills, ridges, or terraces above the valley bottom are less productive because they drain rapidly, although they may act as important recharge areas for the valley-bottom deposits. Reported yields of wells in Mantage, Vernon, and Hardyston Townships tapping these deposits range from 3.5 to 45 gpm (median of 18 gpm) for 21 domestic wells and from 50 to 942 gpm (median of 213 gpm) for 10 industrial wells (Miller, 1971). Depths range from 51 to 211 feet and average 98 feet.
	ice-contact stratified sediment	ic	Chiefly stratified sand and gravel. Sorting generally is poorer than that of ice-marginal stratified sediment. Stratification is less continuous and is commonly deformed. Sediment flow deposits and till, consisting of mixed gravel, silt, and clay, are interlayered with the sand and gravel in places.	Eskers and hummocky terraces generally located within valleys. May be present in the subsurface interbedded with and underlying lake-bottom sediment. Deposits are up to 200 feet thick, but thickness varies greatly over short distances due to topographic irregularities and irregularities of the bedrock surface.	As above.
lake-bottom sediment		lb	Thinly-layered clay, silt, and fine sand. In places, lake-bottom sediment is overlain by up to 25 feet of alluvium and peat.	Flat, low-lying areas in valleys, commonly occupied by wetlands. Deposits generally are less than 50 feet thick but may be up to 150 feet thick.	Lake-bottom sediment is generally poor aquifer because it is comparatively impermeable. However, in Vernon Valley and in the Wallkill valley near Hamburg, lake-bottom sediment is interbedded and underlain by up to 40 feet of water-producing stratified sediment.

RECONNAISSANCE MAP OF THE GLACIAL GEOLOGY HAMBURG QUADRANGLE, NEW JERSEY GEOLOGIC MAP SERIES 85-1

MAP SYMBOLS

-  Contact, approximately located
-  Glacial lake spillway, showing direction of drainage and approximate elevation of spillway (ft.)
-  Meltwater channel, showing direction of flow
-  Glacier margin
(Ticks point toward glacier; dashed where uncertain.)
-  Esker
-  Drumlin, primarily glacial sediment
(Axis parallel to ice flow.)
-  Drumlin, primarily bedrock
(Axis parallel to ice flow.)
-  Striation, showing direction of ice flow
(Dot marks point of observation.)
-  Stream-cut scarp within map unit
-  Water well or test boring reaching bedrock, showing depth to bedrock (ft.), thickness of overlying post-glacial sediment (ft.) in italics above dot, and thickness of underlying weathered bedrock (ft.) in italics below dot, inferred from driller's logs of variable reliability
-  Water well or test boring not reaching bedrock, showing minimum depth to bedrock (ft.) and thickness of overlying post-glacial sediment (ft.) in italics above dot, inferred from driller's logs of variable reliability
-  Glacial lake level (ft.) (Section BB' only.)
-  Numerous bedrock exposures



REFERENCES

1. U.S. Geological Survey, 7.5-Minute Topological Map, Hamburg, New Jersey Quadrangle, 1976.
2. Site Reconnaissance Logbook, July 28, 1992.
3. Graphical Exposure Modeling System, General Science Corporation, April 1990.
4. Supple, A., Resource Applications, Inc. (RAI), Personal communication with Steve Stiagen, Sussex County Health Department, August 18, 1992.
5. Opem, R., RAI, Personal communication with Robert Tapson, NJDEPE, August 17, 1992.
6. Opem, R., RAI, Personal communication with Joseph Douglass, Ames Rubber Corporation, August 18, 1992.
7. Federal Emergency Management Agency, National Flood Insurance Program, Flood Insurance Rate Map, Wantage, New Jersey, Panel Number 340562 0030A, 1984.
8. Ames Rubber Corporation, Notification of Hazardous Waste Activity, August 18, 1980.
9. Ames Rubber Corporation, Application for Hazardous Waste Permit, November 19, 1980.
10. Miller, J.W., Jr., Geology and Groundwater Resources of Sussex County and the Warren County portion of the Tocks Island Impact Area, Bureau of Geology and Topography Bulletin 73, January, 1974.
11. Correspondence between Joseph Douglass, Ames Rubber Corporation and Steve Urbanik, NJDEPE, July 20, 1992.
12. New Jersey Department of Environmental Protection and Energy, Administrative Consent Order, 1992.
13. Stanford, S.D. and Harper, D.P., Reconnaissance Map of the Glacial Geology of the Hamburg Quadrangle, New Jersey. New Jersey Geological Survey Geological Map Series 85-1., 1985.
14. Yadavalli, S., RAI, Personal communication with Keith Arneson, NJDEPE, August 10, 1992.
15. Opem, R., RAI, Wetland acreage calculations, August, 1992.
16. Supple, A., RAI, Personal communication with Daniel Van Abs, August 19, 1992.

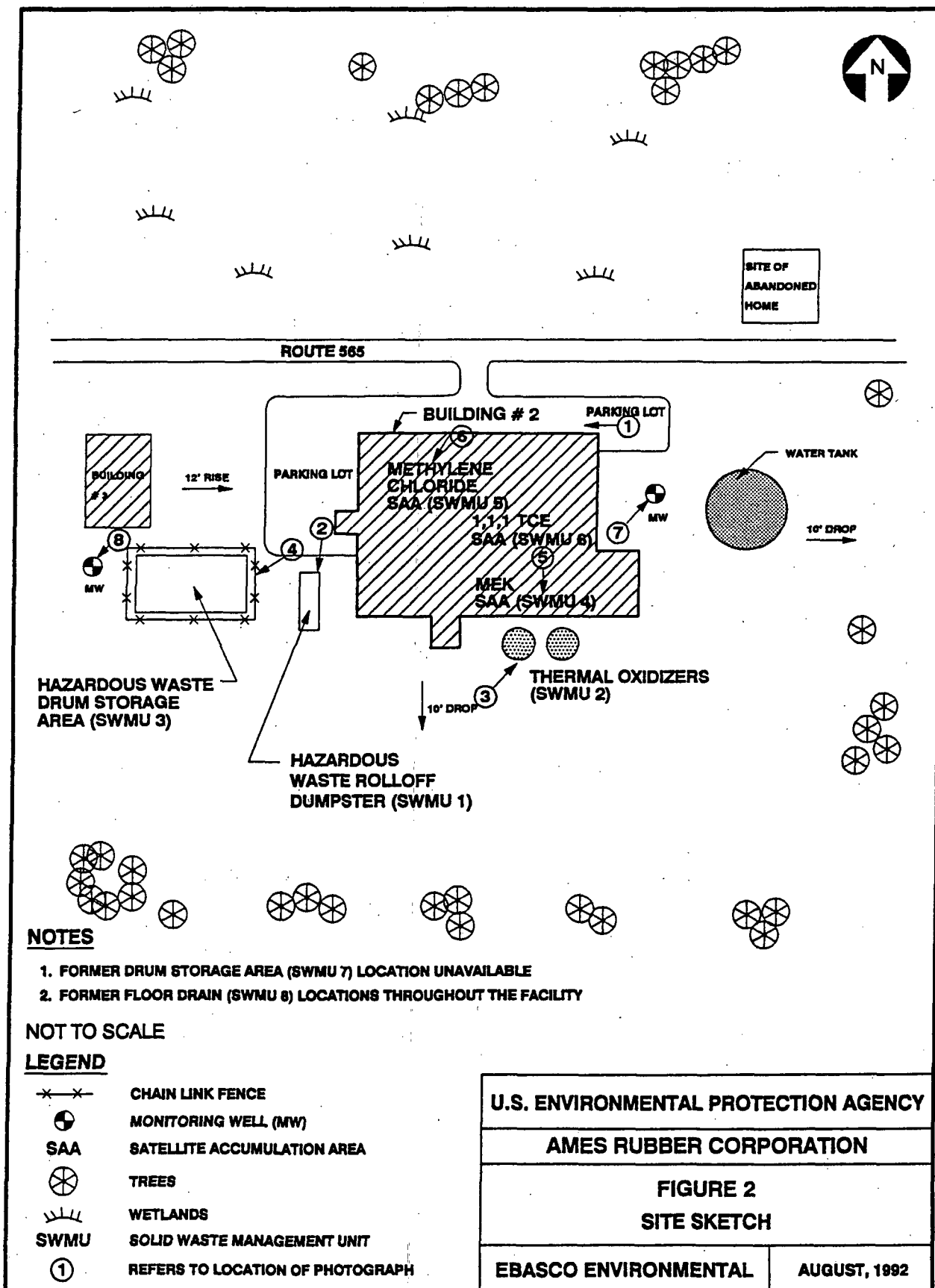
APPENDIX A

**APPENDIX A
AMES RUBBER CORPORATION
PHOTOGRAPH LOG**

**PHOTOGRAPH
NUMBER**

DESCRIPTION OF PHOTOGRAPH

- | | |
|-----|---|
| # 1 | View of front of Building # 2 from parking lot. All process activity at the site takes place in this building. |
| # 2 | View looking south of the Hazardous Waste Roll-Off Dumpster (SWMU 1). This unit, located in the southwest corner of the parking lot to the west of Building # 1, manages office wastes which have been contaminated with solvents used on-site. |
| # 3 | View facing north Thermal Oxidizers (SWMU 2). These oxidizers, located along the south wall of Building # 2, manage methyl ethyl ketone (MEK) emissions from spray booth operations. |
| # 4 | View looking east of the Hazardous Waste Drum Storage Area (SWMU 3). This unit, located to the west of the Hazardous Waste Roll-Off Dumpster (SWMU 2), manages spent solvents MEK, 1,1,1-trichloroethane, and methylene chloride. |
| # 5 | South view of the MEK Satellite Accumulation Area (SWMU 4), located on the south side of Building # 2 adjacent to the paint spray booth area. |
| # 6 | View looking south of the Methylene Chloride Satellite Accumulation Area (SWMU 5), located in the northwest section of Building # 2. |
| # 7 | View facing east of monitoring well # 1 located near the east-central section of Building # 2. |
| # 8 | View looking west of monitoring well # 2 located at the southeast corner of Building # 1. |



SITE RECONNAISSANCE PHOTOGRAPH #1

Location: Ames Rubber Corporation
Wantage, NJ

Date: July 28, 1992

Photographer: Catherine Tolley, RAI

Witness: Richard Opem, RAI



View of front of Building #2 from parking lot. All process activity at the site takes place in this building.

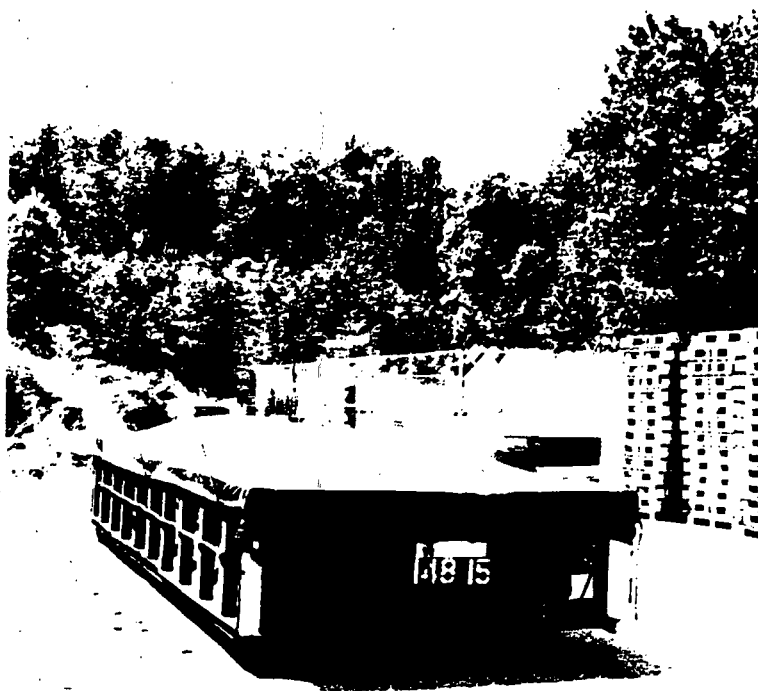
SITE RECONNAISSANCE PHOTOGRAPH #2

Location: Ames Rubber Corporation
Wantage, NJ

Date: July 28, 1992

Photographer: Catherine Tolley, RAI

Witness: Richard Opem, RAI



View looking south of the Hazardous Waste Roll-Off Dumpster (SWMU 1). This unit, located in the southwest corner of the parking lot to the west of Building #1, manages office wastes which have been contaminated with solvents used on site.

SITE RECONNAISSANCE PHOTOGRAPH #3

Location: Ames Rubber Corporation
Wantage, NJ

Date: July 28, 1992

Photographer: Catherine Tolley, RAI

Witness: Richard Opem, RAI



View facing north Thermal Oxidizers (SWMU 2). These oxidizers, located along the south wall of Building #2, manage methyl ethyl ketone (MEK) emissions from spray booth operations.

SITE RECONNAISSANCE PHOTOGRAPH #4

Location: Ames Rubber Corporation
Wantage, NJ

Date: July 28, 1992

Photographer: Catherine Tolley, RAI
Witness: Richard Opem, RAI



View looking east of the Hazardous Waste Drum Storage Area (SWMU 3). This unit, located to the west of the Hazardous Waste Roll-Off Dumpster (SWMU 2), manages spent solvents MEK, 1,1,1-trichloroethane, and methylene chloride.

SITE RECONNAISSANCE PHOTOGRAPH #5

Location: Ames Rubber Corporation
Wantage, NJ

Date: July 28, 1992

Photographer: Catherine Tolley, RAI

Witness: Richard Opem, RAI



South view of the MEK Satellite Accumulation Area (SWMU 4), located on the south side of Building #2 adjacent to the paint spray booth area.

SITE RECONNAISSANCE PHOTOGRAPH #6

Location: Ames Rubber Corporation
Wantage, NJ

Date: July 28, 1992

Photographer: Catherine Tolley, RAI

Witness: Richard Opem, RAI



View looking south of the Methylene Chloride Satellite Accumulation Area (SWMU 5), located in the northwest section of Building #2.

SITE RECONNAISSANCE PHOTOGRAPH #7

Location: Ames Rubber Corporation
Wantage, NJ

Date: July 28, 1992

Photographer: Catherine Tolley, RAI

Witness: Richard Opem, RAI



View facing east of monitoring well #1 located near the east-central section of building #2.

SITE RECONNAISSANCE PHOTOGRAPH #8

Location: Ames Rubber Corporation
Wantage, NJ

Date: July 28, 1992

Photographer: Catherine Tolley, RAI
Witness: Richard Opem, RAI



View looking west of monitoring well #2 located at the southeast corner of Building #1.

REFERENCE NO. 1

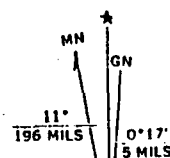
Mapped by the Army Map Service
 Edited and published by the Geological Survey

Control by USC&GS and New Jersey Geodetic Survey

Topography from aerial photographs by stereophotogrammetric methods. Aerial photographs taken 1942 and 1951. Field check 1943. Culture revised by the Geological Survey 1954

Polyconic projection. 1927 North American datum
 10,000-foot grid based on New Jersey coordinate system
 1000-meter Universal Transverse Mercator grid ticks,
 zone 18, shown in blue

Revisions shown in purple compiled by the Geological Survey
 from aerial photographs taken 1971. This information
 not field checked



UTM GRID AND 1971 MAGNETIC NORTH
 DECLINATION AT CENTER OF SHEET

Map photoinspected 1976
 No major culture or drainage changes observed

ROAD CLASSIFICATION

Primary highway, hard surface	_____	Light-duty road, hard or improved surface	_____
Secondary highway, hard surface	_____	Unimproved road	-----
() Interstate Route	() U. S. Route	() State Route	

HAMBURG, N. J.

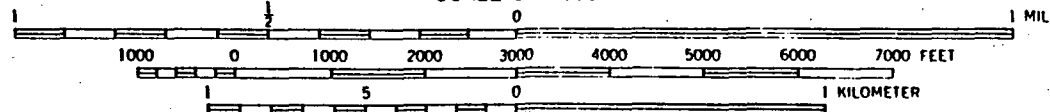
41074-B5-TF-024
 PHOTOINSPECTED 1976
 1954

PHOTOREVISSED 1971
 DMA 6066 II NE-SERIES V822



QUADRANGLE LOCATION

SCALE 1:24 000



CONTOUR INTERVAL 20 FEET
 NATIONAL GEODETIC VERTICAL DATUM OF 1929

REFERENCE NO. 2

(2)

Ames Rubber Corporation

Wantage, N.J.

(2)
11:20 AM Enter

7/28/92

Meet with Joe Douglas, Ames

- Richard Opem, RAI, Test Leader
- Catherine Tolky, RAI, HSO

Weather: Sunny, 75°
no light breeze

R. Opem 7-28-92

6-9-92 / Groundwater Treatment plan submitted to state
Air Permits (#hundreds)

Roto-Clone → Dust control for equipment (process) - 60' high
existing / VST → 10,000 gallon fuel oil

MEK emissions to thermal oxidizers (2) 60' high

Storage pad → Solid haz. and non-haz.
dumpsters

Many Satellite stations → 1 drum per waste stream

Wallkill River → nearest surface water

• Produce Rollers for copier industry → formerly typewriter
plates

Steel Dumpster Solid non-haz — 7' x 30' x 8'
Not covered

Steel Dumpster Solid haz waste height

Contains Paper, cans, containers w/ solvent 4' x 30' x 8'
Covered w/ tarpaulin hooked height

A. Oram 7-28-92

Haz waste pad 10 rows - 4 pallets each capacity
pallets half-full

• some ~~area~~ of area lays on gravel only (to east)

Non-haz, product to the right (west)

5 satel

~~1 pallet~~

D.

19.0. D-28-92

- 4 pallets each capacity
 14-16 ft
 only (to east)
 right (west)

Plant 2 - Product Development
 and Training → being refurbished
 at time of recon.

MW - pumped to tre

• Silicon rolls painted
 in spraybooths

or ③ → Yes
 5 satellite stations? ^{sumu} → 6' high 11' tanks (4)
 3x3' ^{tree} → parts washing
 3' wide roller
~~1 more in plant #2~~

450 all 4 plants

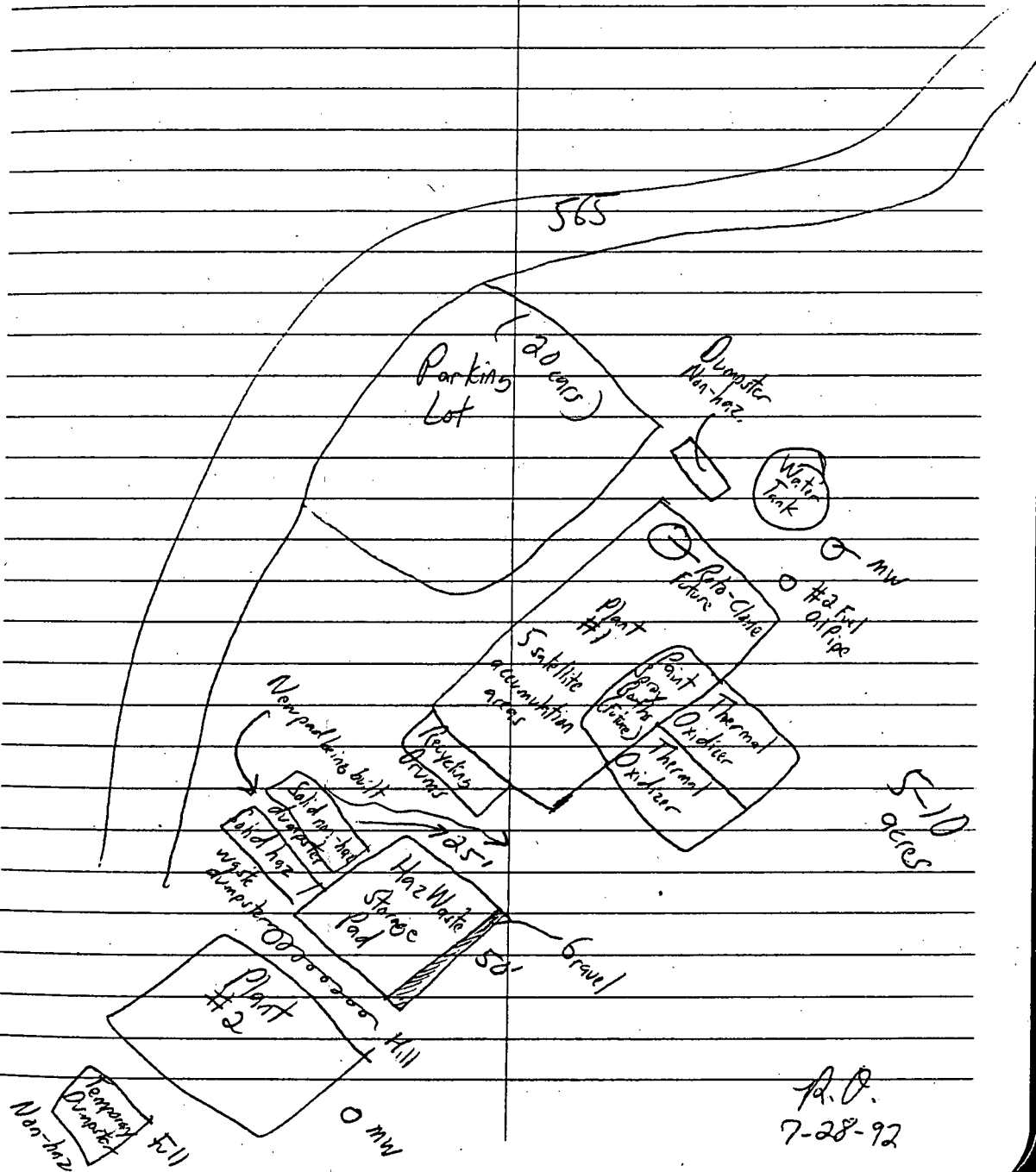
Photo - Clone - dust collection
 permit

Satellite Area	Agas	Solvent
	Sol. & haz waste	Liq. haz waste
Discharge to	Wg/Kill River	Non contact → Permit applied for 1985
		Cooling water

12:15 finish

A.D.
 7-28-92

Site Sketch



A.O.
7-28-92

Perimeter Survey

27 houses within 1 mile to north

0 to south

0 to ~~west~~ west

- Wallkill River .3 miles to north
- Wetlands on perimeter of site to east, north
- Road (Rte 585) to west north
- 1st house .3 miles to northwest
- Site of demolished house .1 mile to north
- Rolling hills around perimeter
- Surf. Water Overland flow to N₃

SWMUs

Rotoclone → New? Not used, installed yet.

Septic System? Yes, only domestic waste

A.D. 7-28-92

AMES RUBBER 7-28-92

CATHERINE F. TOLLEY

arrived 11:20 am

Joe Douglas

gave us monitoring plan

- In process of ^{organizing} constructing g.w.
treatment/maintenance
consent order.

- G.W. only condition that might
be out of compliance

• will have 2 recovery wells
and will cover whole area

permits

- NIDES

- Hydrogeologic report done before
g.w.

- process equipment, air permits, dust,
water

- UST certificate will check on
± UST, 10,000 gal. fuel oil

HMX emission go to Thermal oxidizers
have 2, one is backup

- bag. waste storage pit for drum.

- solid bag - non bag. dumpsters.

CAT 7/28/12

Salalike station - 1 drum per
waste stream, when full is sealed
and delivered to waste pit.

ROCA inspection done in April

Walthill river closest

pop? unknown, rural.

12:26 finished walking tour

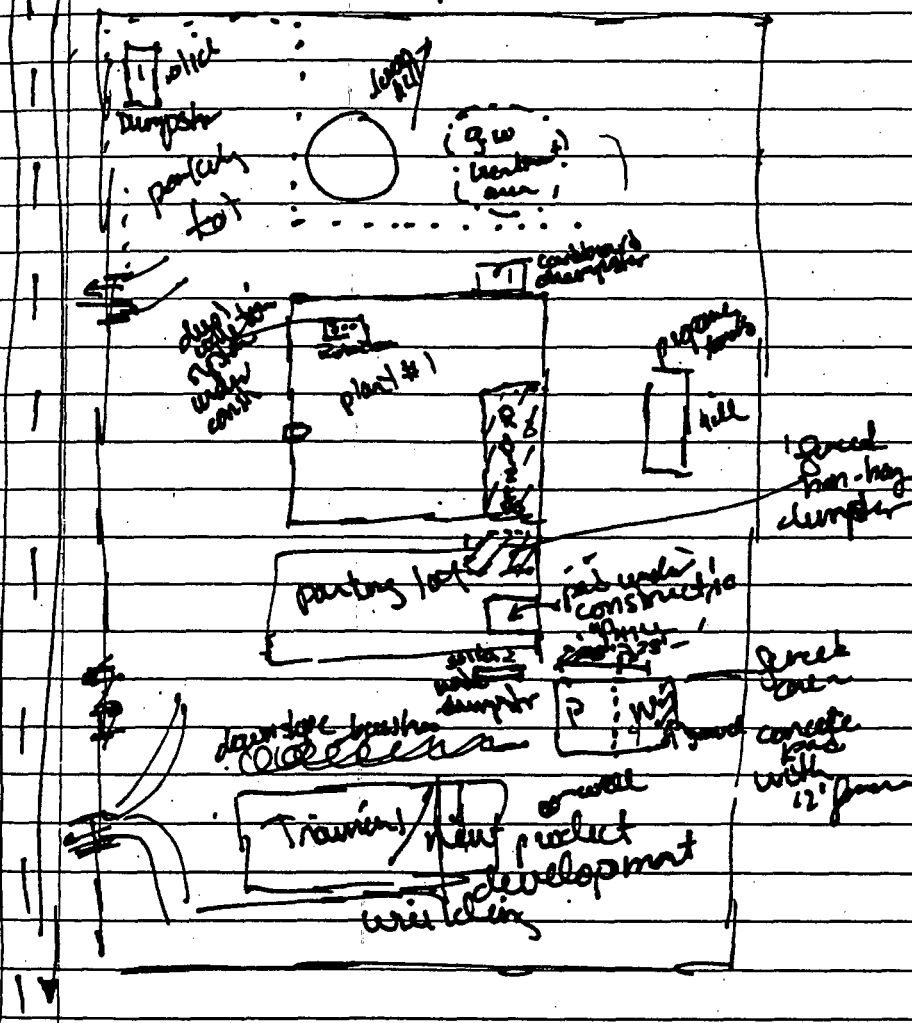
- perimeter clockwise from front door,
plant under renovation

3 sat stations, are in process of
constructing 1 more

- Hamburg has map of site
- electricity out today working on
backup so very dark.

CFT
7-28-92

residences/
walkhill river



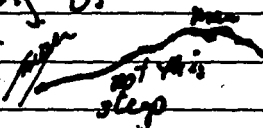
CFT 7-28-72

Sitehouse current

down = .1 north = .3
 nearest res. = .3

within 1 mile = 27 res. on roads north
 south none, west and east? see maps.
 surface water flow - nne,
 wetlands surrounding site

site set on route 565 near
 junction of RD 23, area surrounding
 is very green, land is not
 flat, site ~~is~~ is set on relatively
 flat area, training building is
 down hill from main plant
 surrounding area is
 rolling hills, very steep in some
 places, across the street is relatively
 flat open field



CFT 7-28-12

REFERENCE NO. 3

(3)

LATITUDE 41:12:29 LONGITUDE 74:35: 0 1980 POPULATION

	KM	0.00- 0.4	0.4- 0.8	0.8- 1.6	1.6- 3.2	3.2- 4.8	4.8- 6.4	SECTOR TOTALS
S 1		0	0	0	5410	4086	3466	12962
RING		0	0	0	5410	4086	3466	12962
TOTALS								

AMES RUBBER CORPORATION
WANTAGE, NEW JERSEY

Graphical Exposure Modeling System
General Science Corporation
April 1990

REFERENCE NO. 4

(4)

RAI MEMORANDUM OF TELEPHONE CONVERSATION

PROJECT NUMBER A4020-001 DATE 8/18/92 TIME 3:20 p.m.
PROJECT NAME EBASCO PAS - Ames Rubber and Schneider-Marquard
BETWEEN Alan Supple AND Mr. Steve Stiasen
FIRM Sussex County (NJ) Health Dept. ADDRESS _____
TELEPHONE NUMBER 201/948-4545

CALL PLACED BY: ☒ RAI
☐ OTHER PARTY

SUBJECT Water Wells in the vicinity of the above sites

DISCUSSED Mr. Stiasen told me that there is no municipal water supply in the communities surrounding these sites; the vast majority of people obtain water from private wells. He estimated the number of wells as below:

Ames Rubber within 500' - 2 wells

" 1 mile - \approx 20 wells

" 4 miles - more than 300 wells

Schneider-Marquard - probably \approx 20 wells within a 4-mile radius, including Fredon Public School and Town Hall (very close by)

Most wells in both areas are thought to be completed in Martinsburg Shale, although some may be in glacial deposits, especially east of Ames, adjacent to Walkkill River
sand & gravel.

Only about half the wells are recorded, as some are too old.

☐ NEED FOLLOW-UP

Alan L. Supple
SIGNATURE

REFERENCE NO. 5

5

RAI MEMORANDUM OF TELEPHONE CONVERSATION

PROJECT #	<u>A4020-200-05-40A</u>	DATE	<u>8/19/92</u>	TIME	<u>1:15</u>
PROJECT NAME	<u>EBASCO ARCS II</u>				
BETWEEN	<u>S. Vadavalli</u>	AND	<u>S. Stiegen</u>		
FIRM	<u>Sussex County (NJ) Health Department</u>				
ADDRESS					
TEL. NUMBER					

CALL PLACED BY: ☐ RAI

☐ OTHER PARTY

SUBJECT Sensitive environments near site

DISCUSSED Called to check on identification of any terrestrial sensitive environments or fisheries (besides Wallkill River) w/in 15 miles of the Ames site. None were identified except for the surrounding wetlands.

☐ NEEDS FOLLOW-UP

A. Ojeda
SIGNATURE

g:\misc\teleform

REFERENCE NO. 6

RAI MEMORANDUM OF TELEPHONE CONVERSATION

PROJECT #	<u>A4020-200-05-40A</u>	DATE	<u>8/18/92</u>	TIME	<u>3:58 PM</u>
PROJECT NAME	<u>ARCS II Ames Rubber PA</u>				
BETWEEN	<u>Rich Ogem RAI</u>	AND	<u>J. Douglass, Ames Rubber</u>		
FIRM	<u>Ames Rubber</u>				
ADDRESS	<u>Wantage, NJ</u>				
TEL. NUMBER	<u>(201) 827-9101</u>				

CALL PLACED BY: ☒ RAI
☐ OTHER PARTY

SUBJECT Groundwater discharge, septic question
DISCUSSED Check with Mr. Douglass to find out the real reason for the groundwater discharge of contaminants which were detected in 1984. I thought it was a septic system discharge but Mr. Douglass said this was not the problem. He said nobody was sure what the real source of contaminants was, but that some former drum storage areas, no longer in existence, were thought to be the problem. These areas were in various locations unknown to him, around the site. He didn't know if they had secondary containment. I also checked to make sure if any other spent solvent wastes were generated besides MEK 1,1,1-Trichloro and Methylene Chloride. He said, these three were the only solvents.

☐ NEEDS FOLLOW-UP

Richard Ogem
SIGNATURE

8-18-92

REFERENCE NO. 7

81

NATIONAL FLOOD INSURANCE PROGRAM

7

FIRM

FLOOD INSURANCE RATE MAP

TOWNSHIP OF
WANTAGE,
NEW JERSEY
SUSSEX COUNTY

PANEL 30 OF 40

(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER

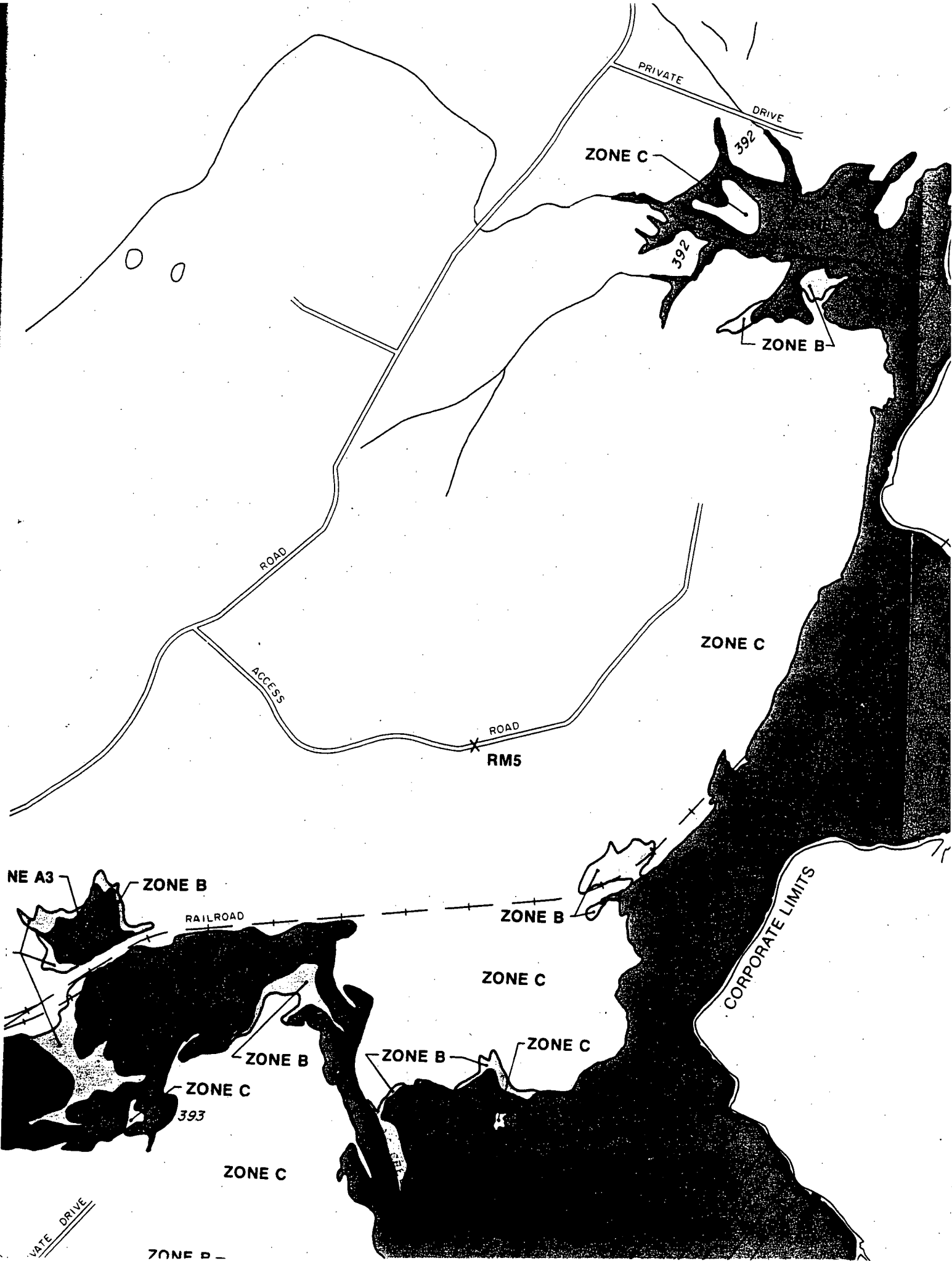
340562 0030 A

EFFECTIVE DATE:

FEBRUARY 15, 1984



Federal Emergency Management Agency



REFERENCE NO. 8

label, affix it in the space at left. If any of the information on the label is incorrect, draw a line through it and supply the correct information in the appropriate section below. If the label is complete and correct, leave items I, II, and III below blank. If you did not receive a preprinted label, complete all items. "Installation" means a single site where hazardous waste is generated, treated, stored (and/or disposed of) on a transporter's principal place of business. Please refer to the INSTRUCTIONS FOR FILING NOTIFICATION before completing this form. The information requested herein is required by law (Section 3010 of the Resource Conservation and Recovery Act).

FOR OFFICIAL USE ONLY

COMMENTS

INSTALLATION'S EPA I.D. NUMBER

APPROVED

DATE RECEIVED
(yr., mo., & day)

FWD 00087851821

800818

I. NAME OF INSTALLATION

AMES RUBBER CORPORATION

II. INSTALLATION MAILING ADDRESS

STREET OR P.O. BOX

ROUTE 94

CITY OR TOWN

HAMBURG

ST. ZIP CODE

NJ 07419

III. LOCATION OF INSTALLATION

STREET OR ROUTE NUMBER

ROUTE 565

CITY OR TOWN

SUSSEX

ST. ZIP CODE

NJ 07461

IV. INSTALLATION CONTACT

NAME AND TITLE (print name and title)

MAJOS RICHARD D. R. REG. AFFAIRS 201 827 9101

V. OWNERSHIP

NAME OF INSTALLATION'S OWNER

AMES RUBBER CORPORATION

TYPE OF OWNERSHIP (enter the appropriate letter into box)

FEDERAL

NON-FEDERAL

M

VI. TYPE OF HAZARDOUS WASTE ACTIVITY (enter "X" in the appropriate box(es))

A. GENERATION

B. TRANSPORTATION (complete item VII)

C. TREAT, STORE, DISPOSE

D. UNDERGROUND INJECTION

VII. MODE OF TRANSPORTATION (transporter only - enter "X" in the appropriate box(es))

A. AIR

B. RAIL

C. HIGHWAY

D. WATER

E. OTHER (specify)

VIII. FIRST OR SUBSEQUENT NOTIFICATION

Mark "X" in the appropriate box to indicate whether this is your installation's first notification of hazardous waste activity or a subsequent notification. If this is not your first notification, enter your installation's EPA I.D. Number in the space provided below:

A. FIRST NOTIFICATION

B. SUBSEQUENT NOTIFICATION (complete item C)

C. INSTALLATION'S EPA I.D. NO.

IX. DESCRIPTION OF HAZARDOUS WASTES

Please go to the reverse of this form and provide the requested information.

REFERENCE NO. 9



GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER

FWD0008185183D

9

GENERAL INSTRUCTIONS

If a preprinted label has been provided, affix it in the designated space. Review the information carefully. If any of it is incorrect, cross through it and enter the correct data in the appropriate fill-in area below. Also, if any of the preprinted data is absent (the area to the left of the label space lists the information that should appear), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete items I., III., V., and VI. (except VI-B which must be completed regardless). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column. If the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements, see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.

SPECIFIC QUESTIONS	MARK "X"			SPECIFIC QUESTIONS	MARK "X"		
	YES	NO	FORM ATTACHED		YES	NO	FORM ATTACHED
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)		X		B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)		X	
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)		X		D. Is this a proposed facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)		X	
E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)	X			F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing within one quarter mile of the well bore underground sources of drinking water? (FORM 4)		X	
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production? Injected fluids used for enhanced recovery of oil or natural gas or injected fluids for storage of liquid hydrocarbons? (FORM 4A)		X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in-situ combustion of fossil fuels, or recovery of geothermal energy? (FORM 4B)		X	
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X		J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)		X	

III. NAME OF FACILITY

AMES RUBBER CORP. WANTAGE PLANT

IV. FACILITY CONTACT

RICHARD J. MAJOS MGR REG AFFAIR 201 827 9101

V. FACILITY MAILING ADDRESS

23-47 AMES BLVD

HAMBURG

VI. FACILITY LOCATION

ROUTE 565

SSEX

WANTAGE

NJ 07461

30.69 (specify) RUBBER PRODUCTS		7 (specify)	
C. THIRD		D. FOURTH	
(specify)		7 (specify)	

VIII. OPERATOR INFORMATION

A. NAME AMES RUBBER CORPORATION			B. Is the name of the owner? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.) F - FEDERAL M - PUBLIC (other than federal or state) S - STATE O - OTHER (specify) P (specify) P - PRIVATE			D. PHONE (area code & no.) 201 827 9101	
E. STREET OR P.O. BOX 23-47 AMES BLVD				
F. CITY OR TOWN HAMBURG		G. STATE NJ	H. ZIP CODE 07419	IX. INDIAN LAND Is the facility located on Indian lands? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water) 9/1/80		D. PSD (Air Emissions from Proposed Sources) 9/1/80	
B. UIC (Underground Injection of Fluids) 9/1/80		E. OTHER (specify) (specify)	
C. RCRA (Hazardous Wastes) 9/1/80		F. OTHER (specify) (specify)	

XI. MAP

In this application, a topographic map of the area extending to at least one mile beyond property boundaries. The map must show outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers, and other surface water bodies in the map area. See instructions for precise requirements. **9/1/80**


XII. NATURE OF BUSINESS (provide a brief description)

F9: A/SI

Ames Rubber Corporation is primarily a custom producer of elastomerically coated metal products such as typewriter platens and paper- or film-feeding roller mechanisms. In addition to the production of other smaller elastomerically coated metal parts, our manufacturing facilities routinely mold elastomeric products used in the paper goods industry, the automotive industry, and many others. Some of the types of elastomeric compounds used and produced for our customer applications include natural rubber, SBR, nitrile types, silicone, butyl, polyurethane and others.

XIII. CERTIFICATION (see Instructions)

I, **ARNOLD E. WRIGHT**, certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments, and that based on my inquiry of those persons immediately responsible for obtaining the information contained in this application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

NAME & OFFICIAL TITLE (type or print) ARNOLD E. WRIGHT / VICE PRES. MANUFACTURING	B. SIGNATURE 	C. DATE SIGNED 11/19/80
--	---	--

XIV. COMMENTS FOR OFFICIAL USE ONLY

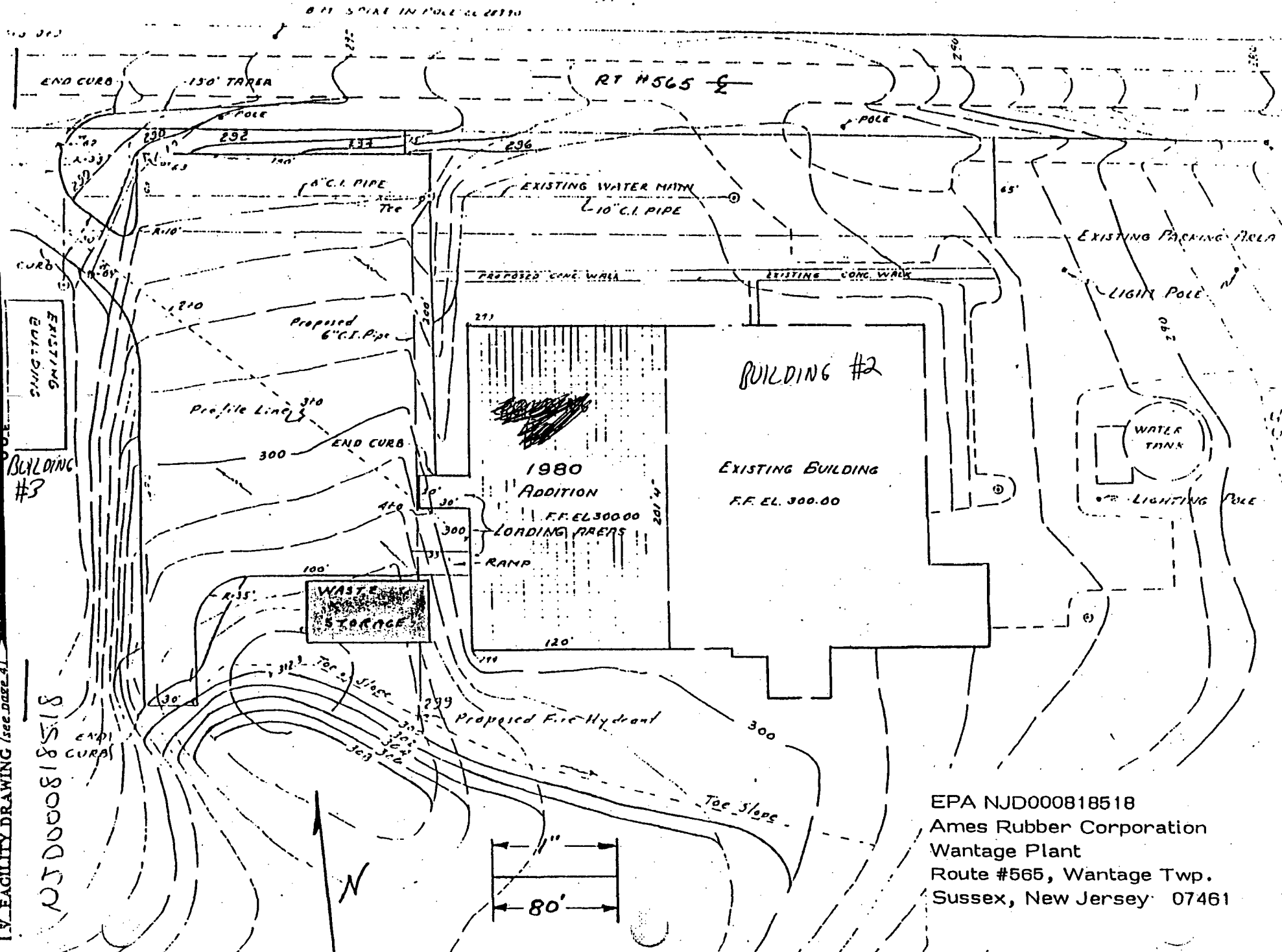
SITE SKETCH - FIGURE 2

Form Approved OMB No. 158-S8C

Continued from page 4.

1. FACILITY DRAWING (see page 4)

NJD000818518



EPA NJD000818518
 Ames Rubber Corporation
 Wantage Plant
 Route #565, Wantage Twp.
 Sussex, New Jersey 07461

REFERENCE NO. 10

(10)

GEOLOGY and GROUND WATER RESOURCES of SUSSEX COUNTY and the WARREN COUNTY PORTION of the TOCKS ISLAND IMPACT AREA

by

JOSEPH W. MILLER, JR.
Principal Geologist

STATE OF NEW JERSEY
BRENDAN T. BYRNE, *Governor*

Department of Environmental Protection
DAVID J. BARDIN, *Commissioner*

Division of Water Resources
GEORGE C. FRIEDEL, *Acting Director*

Bureau of Geology and Topography
Kemble Widmer, *State Geologist*

January 1974

Bureau of Geology and Topography
BULLETIN 73

**GEOLOGY and GROUND WATER
RESOURCES of SUSSEX COUNTY and the
WARREN COUNTY PORTION of the
TOCKS ISLAND IMPACT AREA**

**Department of Environmental Protection
Division of Water Resources**

**BULLETIN 73
Bureau of Geology and Topography**

ABSTRACT

Sussex County and the Warren County portion of the Tocks Island Impact Area are primarily agricultural. Commercial, industrial and resort developments are occurring at an increasingly rapid rate.

Ground water supplies approximately 60% of the estimated daily water consumption. Water utilities furnish the balance with surface water or a combination of ground water and surface water. Most of the ground water is obtained from rock wells; only a small percentage of the wells are located in unconsolidated Pleistocene deposits.

Over 3,000 records of domestic, industrial and public supply wells were examined and are included in the report. The interpretations and conclusions presented are based on these driller's records which, although not precise or complete, give a good indication of reasonable expectations of depth and yield for each formation.

There are no known areas where ground water levels have declined because of over pumping. Domestic supplies may be developed almost anywhere in the study area. Moderate to large supplies can generally be developed from wells located in stratified drift, in cavernous members of the Kittatinny Formation and in shear zones near faults. Wells completed in the Precambrian crystallines, in the non-cavernous members of the Kittatinny Formation, and in the Martinsburg Formation usually will have very low yields: between 36 to 47% will have yields of 5 gpm or less.

The quality of ground water is generally good for most uses. Locally, the water will have to be treated for hardness, low pH, high iron content and high SO_4 .

ACKNOWLEDGMENTS

This report was prepared under the general supervision of Kemble Widmer, State Geologist of New Jersey, who provided guidance and invaluable counsel and advice.

The author is indebted to numerous organizations, industries and individuals who provided data for this report. The following geologists from the New Jersey Geological survey made contributions to this report: Haig F. Kasabach prepared the Geologic Map, supervised the preparation of the Base Map, and plotted a good portion of the wells on the Well Location Map. The text follows the format of his Geology and Ground Water Resources of Hunterdon County, N. J. Carol Lucey assisted in the well tabulations, proofreading and editing the text. Frank Markewicz provided much valuable information pertaining to the geology of the counties and revised the Precambrian and Paleozoic geology in several areas; his description is used in the breakdown of the Kittatinny Formation and he critically reviewed the chapter on geology and the Geologic Map. Mr. George Banino also critically reviewed this report.

The United States Geological Survey at Trenton provided base flow data for the major watersheds. Mr. Donald Dunlap of the United States Weather Bureau in New Brunswick provided the climatological data. The Bureau of Water Control, in the Department of Environmental Protection, furnished most of the water consumption data. The New Jersey Department of Health furnished the chemical analyses of the Public Water Supplies. Mrs. Gladys W. Ellsworth, Chief, Bureau of Research and Statistics, Division of Economic Development, Department of Labor and Industry, furnished the population data. Mr. J. L. Baum furnished bedrock data in the Franklin, Hamburg, McAfee and Ogdensburg areas.

Special acknowledgment is extended to Miss Beverly Birban and Mrs. Dorene Sarnoski for their care and patience in typing this report; to Mr. George Caruso, who drafted most of the plates and illustrations; and to Mr. John Kremper, who finished the drafting.

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by Markewicz and Dalton in Sussex and Warren Counties. The following breakdown is from Markewicz (1969).

Leithsville Formation

The Lower Cambrian Leithsville Formation is a massive, medium to fine-grained, impure, calcareous dolomite, commonly referred to as "dolomite limestone". Locally it can be coarsely crystalline and very massive.

Basal Leithsville can consist of massive, thick bedded, very dark dolomite or bluish gray, fine to medium grained dolomite in beds from one to three feet thick with some minor thin, shaley interbeds. Weathered surfaces are gray to dark gray. Fresh rock is bluish to dark gray with local units almost black. Chert, often present in some basal units, is usually associated with the thinner bedded dolomite. This dark lower unit has yielded specimens of the fossil *Hyolithellus-micans*.

Above the basal beds the Leithsville tends to be lighter colored on both weathered and fresh exposures. It is medium bedded to locally laminated with calcareous shale and tan micaceous shale interbeds, which weather yellowish. Above this the dolomite becomes medium to thick bedded with occasional chert and sandy beds.

Mud cracks, coarse-bedding, chert nodules, edgewise conglomerate and horizons of oolitic and pisolitic structure have been observed in the upper section. The formation appears to be about 1,000 feet thick (Drake and others, 1967).

Allentown Formation

It is a thick (1,300 ft. +) Markewicz, (1969) rhythmically bedded, light to dark gray, fine to medium grained, crystalline, impure dolomite in beds from several inches to more than three feet thick. Weathered rock is light gray to dark gray with a fine to smooth textured surface.

The lower half of the formation is an alternating sequence of light to dark thin bedded dolomite with intercalated shaley bands. Thin, undulatory, dark, medium to coarse grained, impure dolomitic and oolitic beds are common. These beds may give off a light to strong foul odor when struck with a hammer. Stromatolites, oolites, chert lenses, ripple marks, cut and fill structure, edgewise conglomerate and sedimentary breccia are common.

Upper Allentown is generally thicker bedded with scattered thin beds that weather to a very smooth textured, cream colored surface. Chert is more abundant and stromatolites, oolites, shaley beds, ripple marks and sedimentary breccia are less abundant as compared to the lower part.

Rickenbach Formation

The Lower Rickenbach (700 ft. +) Markewicz, (1969) consists of gray to dark gray, fine to coarse crystalline rock that sparkles on the fresh surface. Basal beds are massive with local thin shaley beds. Chert occurs as spotty, discontinuous thin beds and lenses. When struck with a hammer, basal beds emit a very fetid odor.

Upper beds become finer grained, less crystalline, lighter colored and more thinly bedded with some calcareous sandstone and occasional dolomite beds containing frosted quartz grains and scattered smokey calcite crystal clusters. The offensive odor is not as strong. Chert becomes more abundant as nodules and thin bands.

Epler Formation

The Epler Formation (800 ft. +) Markewicz, (1969) is an interbedded, very fine grained to crypto-granular, light to medium gray limestone and fine to medium grained, light to dark, medium gray dolomite. Nodular and bedded chert are common and there is a prominent chert rich zone near the base.

Hydrology

The Kittatinny Formation has no primary porosity and ground water has to move through joints, fractures and solution cavities within the rock. Carbonate rocks differ from other consolidated rocks because they are relatively soluble in weak acid solutions. Rain falling through the atmosphere picks up carbon dioxide and forms a weak carbonic acid. Water percolating downward through the soil picks up additional carbonic acid and weak organic acids. This weak acid solution then percolates down through joints and fractures, slowly dissolving the limestone until large channels and caverns are formed.

Solution channels are usually more abundant in valleys, depressions, and near streams and rivers. The distribution of the channels is extremely irregular, and usually is difficult to predict. However, sinkholes, funnel shaped depressions in the land surface, are usually connected with large solution channels in the underlying limestone. A series of sinkholes may be aligned along an underground cavern. A well drilled on this line would have a good chance of intercepting a cavern and could produce a large quantity of water. Many of the solution channels are more or less filled with clay but with prolonged pumping an excellent well can be developed. On the other hand, wells which encounter relatively unfractured limestone or dolomite will have low yields.

Faults which may contain large quantities of water in other consolidated non-porous rocks are generally tight in the Kittatinny Limestone. The recemented breccia, mylonite and recrystallized rock in the fault proper are frequently harder and better cemented than the surrounding rock and often form a slightly higher ridge in the terrain. However, the unbrecciated limestone adjacent to the fault is usually more fractured than the normal unfractured limestone elsewhere. These numerous fractures tend to become enlarged by ground water and form sizeable solution channels and caverns.

Ground water in the Kittatinny Formation is found under both water-table and semi-artesian conditions. Water table conditions exist near the ground surface and semi-artesian conditions occur in some of the deeper solution channels, which are recharged through sinkholes or water table aquifers. Because the solution channels are usually quite irregular, two neighboring high-capacity wells may tap different solution channels and not interfere with each other at all. However, two high yielding wells on the same system would rapidly transmit the effect of pumping over considerable distances with a consequent increase in drawdown.

Most successful wells have intersected large caverns between 50 and 300 feet. Below 600 feet the chances of obtaining a good supply from the Kittatinny Formation is generally slight, although there have been exceptions in areas not covered by this report.

Wells drilled in either the Rickenbach or Leithsville Formation would be much more apt to intersect solution channels than those drilled in the Epler or Allentown Formations Dalton, (1969).

Reported yields from 422 domestic wells, pumping from the Kittatinny Formation, range from $\frac{1}{4}$ to 120 gpm with an average of 14 gpm. Thirty-five percent yielded 5 gpm or less. Fifteen percent yield between 16 and 25 gpm. Fourteen percent yield between 26 and 79 gpm. Three wells yield 100 gpm and two wells yield 120 gpm.

Yields from the 32 industrial wells range from a minimum of 18 gpm to a maximum of 815 gpm, with an average of 162 gpm and median of 100 gpm. Forty-one percent yielded less than 100 gpm. Thirty-four percent yielded between 200 and 299 gpm. Nine percent yielded over 300 gpm.

Specific capacities of 273 domestic Kittatinny Formation wells range from .00 to 3.11 gpm per foot of drawdown and averaged 1.05 gpm per foot of drawdown. Specific capacities for 26 industrial Kittatinny Formation wells range from .08 to 33.95 gpm per foot of drawdown and averaged 4.40 gpm per foot of drawdown. Eight wells had a specific capacity of infinity and six wells had a specific capacity of .00 gpm per foot of drawdown.

ORDOVICIAN JACKSONBURG LIMESTONE

Geology

The Jacksonburg Limestone rests unconformably on the Epler Formation (upper member of the Kittatinny Formation). It is a black or dark blue limestone often with dolomite pebbles at the base, and limy shale (cement rock) at the top. "The thickness of the Jacksonburg varies greatly in New Jersey. It probably is between 125-300 feet thick." Kummel (1940).

Hydrology

There are too few wells drawing from the Jacksonburg Limestone to summarize.

MARTINSBURG FORMATION

Geology

The Martinsburg Formation lies unconformably on the Jacksonburg Limestone. It is the most extensive formation in the Valley and Ridge Province. It is seven miles wide at the New York State Line. It is an intensely crumpled and faulted sequence of shale, slate, sandstone and calcareous siltstone. On the whole, the fine grained shale and slate are black and are more abundant in the lower part, whereas the sandstone beds are dark bluish gray, many of them calcareous, and occur more commonly higher in the formation. Estimates of the thickness of the formation vary from 5,000 to 11,000 feet. Kummel, (1940).

Hydrology

The Martinsburg Formation has no primary porosity or permeability except in some of the sandstones and calcareous sandstone beds. They are described by one well driller as "honey comb rock." Nearly all the ground water is contained in fractures.

In the Appalachian Valley and Ridge Province of Sussex and Warren Counties the fractures in the Martinsburg seem to be quite tight and it is, on the whole, a very poor aquifer. Ground water occurs under water-table conditions except in some of the deeper wells where water may be semi-confined in sandstone, limestone, a more permeable shale horizon, or a fault shear zone.

Of the 919 domestic wells, only 495 have sufficient pumping data to summarize. The reported yields range from $\frac{1}{2}$ gpm to 120 gpm with an average of $10\frac{1}{2}$ gpm, and a median of 6 gpm. The specific capacities range from .00 to 20.00 gpm per foot of drawdown with an average of .39 gpm per foot of drawdown. Six wells had a specific capacity of infinity and twelve wells have a specific capacity of .00 gpm per foot of drawdown. Forty-seven percent yielded 5 gpm or less. Thirty-five percent yielded between 6 and 15 gpm. Nine percent yielded between 16 and 25 gpm. Eight percent yielded between 26 and 75 gpm. One percent yielded between 100 and 120 gpm.

Of the 20 industrial wells, only 12 had sufficient pumping data to summarize. The reported yields range from 109 to 6.25 gpm per foot of drawdown with an average of 1.22 gpm per foot of drawdown. Fifty-three percent yielded 40 gpm or less. One well yields 45 gpm; three wells yield 50 gpm; one well yields 75 gpm and one well yields 220 gpm.

The reported depths of the 919 domestic wells range from 35 feet to a maximum of 683 feet. The average is 169 feet and the median is 132 feet. Fifty-one percent were shallower than 149 feet. Thirty-two percent ranged between 250 and 299 feet deep, and the balance, or 9%, are 300+ feet deep.

The reported depths of the industrial wells range from 178 to a maximum of 833 feet. The average depth is 333 feet and the median is 304 feet. Thirty-three percent of the industrial wells range between 200 and 299 feet deep; 26% range between 300 and 399 feet deep and the balance were 400+ feet deep.

Most successful wells in the Martinsburg Formation are in the weathered zone within 200 feet of the surface. Depths of wells are completely unpredictable.

NEPHELINE SYENITE

Geology

The Beemerville Nepheline Syenite is perhaps the largest intrusive body of its type in the eastern United States. There are several facies, all with abundant nephelite, but with textures varying from coarsely granular to fine grained tinguaitite. The tinguaitite occurs as small dike-like bodies cutting the granular and porphyritic types of nephelite syenite Milton (1952). It is further described by Wilkerson (1946) and Kemp (1892).

There are numerous dikes (mostly unmapped) and several volcanic plugs, the largest being Rutan Hill.

Hydrology

The Nepheline Syenite and its accompanying dikes and volcanic plugs are insignificant as far as ground water is concerned.

MARTINSBURG HORNFELS

Geology

The Martinsburg Hornfels was formed when the Beemerville Nepheline Syenite and its associated dikes intruded and metamorphosed the Martinsburg Shale in Wantage Township, Sussex County. It is a dense, fine-grained dark gray to black rock, and extends $2,000 \pm$ feet from the intrusive body (Spink, 1967).

WALPACK TOWNSHIP

Drillers' Logs of Wells, Walpack Township (Depths below land surface are given in feet)

Well #	Depth	Log	Formation	Well #	Depth	Log	Formation
5	15-52	Gray quartzite	Ssg	38	-171	Brown sandstone	
	-58	Same			-187	Red sandstone	
	-76	Hard, gray quartzite and inter-bedded red shale			-263	Gray sandstone, very hard	
	-83	Fine-grained, sea green and dull red quartzite			-277	Brown sandstone, very soft	
	-90	Very fine-grained, dull red quartzite			-285	Gray sandstone, very hard	Ssg
	-99	Fine-grained light green quartzite		39	0-34	Glacial drift with boulders	Shf
	-101	Rusty brown quartzite, nearly all grains coated with limonite			-125	Brown sandstone	Shf
	-114	Fine-grained, light brown quartzite		40	0-3	Overburden	
6	0-47	Glacial drift	Spi-Do		-110	Red sandstone	Shf
	-116	Soft limestone	Qul	43	0-150	Clay, gravel and boulders	Shf
7	0-105	Sand and gravel			-195	Red rock	Shf
8	0-105	Red clay		44	0-104	Sand, gravel and boulders	Shf
	-117	Gravel and sand			-170	Gray sandstone	Shf
	-123	Lime rock	Spi-Do	45	0-3	Overburden	
11	0-8	Dirt	Don		-20	Red shale	Shf
	-150	Limestone			-398	Gray rock	Ssg
16	0-4	Overburden	Don	46	0-21	Overburden	Ssg
	-108	Hard limestone			-147	Gray rock	Shf
	-120	Soft, brown sandstone		47	0-21	Overburden	
21	0-221	Conglomerate of white quartz, pebbles in red to bluish matrix	Ssg		-320	Red rock (sandstone?)	Shf
23	0-25	Shale		48	0-5	Overburden	
	-300	Conglomerate of white quartz, pebbles in red to bluish matrix	Ssg		-160	Alternating bands of quartzite and shale	Shf
25	0-20	Red shale and sandstone	Shf	49	0-5	Overburden	
	-60	Pinkish shale and sandstone			-245	Alternating bands of quartzite and shale	Shf
	-80	Red sandstone		50	0-7	Overburden	
	-100	Pinkish sandstone			-8	Black-white sandstone	Shf
	-120	Fine-grained yellow-brown sandstone			-25	Black-gray sandstone	
	-150	Blue shale			-82	Shale	
	-180	Brown-gray shale			-85	Brown sandstone	
	-197	Light gray, fine-grained shale			-100	Gray sandstone	
38	0-8	Hardpan and cobbles			-130	Brown-white sandstone	
	-58	Red sandstone	Shf		-140	Shale	
	-82	Gray sandstone		51	0-2	Overburden	
	-103	Red sandstone			-25	Red sandstone	Shf
	-127	Gray sandstone			-190	Hard sandstone	
	-152	Red sandstone		52	0-5	Overburden	
					-68	Red shale	Shf
					-91	Hard sandstone	
					-100	Red shale	
					-298	Hard sandstone	

WANTAGE TOWNSHIP (Including SUSSEX)

DOMESTIC WELLS

Formation	No. of Wells
Martinsburg Hornfels (Ombh)	12
Martinsburg Formation (Omb)	257
Kittatinny Formation (Cok)	15

YIELD IN GALLONS PER MINUTE

Maximum	Minimum	Average	Median
18	1	5½	3
100	½	10	5
50	2	18	15

DEPTH IN FEET BELOW SURFACE

Formation	No. of Wells	Maximum	Minimum	Average	Median
Martinsburg Hornfels (Ombh)	12	273	104	179	173
Martinsburg Formation (Omb)	257	698	35	182	152
Kittatinny Formation (Cok)	15	359	63	158	137

1 Wells and formations with insufficient data are not summarized.

WANTAGE TOWNSHIP (Including SUSSEX)

INDUSTRIAL WELLS 2

Formation	No. of Wells	Maximum	Minimum	Average	Median
Martinsburg Formation (Omb)	9	50	2	31	33

YIELD IN GALLONS PER MINUTE

DEPTH IN FEET BELOW SURFACE

Formation	No. of Wells	Maximum	Minimum	Average	Median
Martinsburg Formation (Omb)	9	833	206	394	311

² There is 1 additional industrial well from the Kittanning Formation. See regional summary of industrial wells.

Well No.	Owner	Year Drilled	Cap. dia. (in.)	Yield (gpm)	Depth (ft.)	FORMATION	Screen Setting or depth of cased. (ft.)	Static Water Level (ft.)	Pumping Level hrs Pumped	Depth to Bedrock	USE
1	R. Niehling	1932	6	36	84	Omb	24	3	9/2	0	
2	W. Ayers	1932	6	7	99	"	32	12			
3	F. Hughes	1948	6	10	104	Ombh	49	17	90/1	49	
4	K. Leonhardt	1949	6	9	122	"	58	29	50/1	58	
5	S. Keasler	1948	6	18	112	"	76	63	95/1	76	
6	L. Howell	1951	6	10	35	Omb	20	12	25/1	20	
7	M. Haggerty	1948	6	4	181	"	106	5	103/1	106	
8	L. Banghart	1951	6	5	47	"	17	7	41/1	17	
9	L. Carr	1949	6	20	140	"	18	5	40/8		
10	A. Maroldi	1952	6	15	66	"	23	7	20/2		
11	R. Edsell	1951	6	1	218	"	8	54	200/1		
12	C. Gilliken	1953	6	1	250	"	20	15	240/8		
13	B. Wilson	1953	6	6	82	"	20				
14	C. D. Becker	1949	6	1	290	"	19	37	bottom	18	
15	J. Tierney	1948	6	1/2	132	"	30	14	bottom	30	
16	W. G. Friend	1951	6	1 1/2	346	"	3	2	100/1	3	
17	S. Retz	1953	6	12	94	"	Deepened	24			
18	Simmons Realty Co. #3	1950	6	17	150	"	58	26	80/2	55	
19	B. Repsher #2	1952	6	10	110	"	13	52	80/2	10	
20	E. Bishop	1953	8	21 1/2	223	"	12	28	85/6		
21	S. Mikrut	1953	6	20	84	"	30	24	25/2	27	
22	C. W. Brownell Co. #2	1951	6	30	36	Qul	36	5	5/2		
23	J. Todd, Jr.	1948	6	2	272	Omb	52	47	65/1	52	
24	E. Johnson	1948	6	2	120	"	54	23	40/1	54	
25	A. Rizzo	1953	6	35	75	Col	24	8	8/2		
26	American Tel. & Tel. Co.	1959	6	45	500	Omb	28	31			1
27	" " " " "	1959	6	15	500	"	21	13 1/2			1
28	E. Denman, Sr.	1964	6	1 1/2	413	"	30	13	350/2		
29	K. Boyd	1954	6	10	95	"	12	flows		0	
30	W. Hill	1965	6	8	80	"	31	10	60/2		
31	M. Ciceralo	1964	6	10	90	"	20	5	60/2		
32	L. Wojcik	1965	6	10	135	"	30	4	80/2		
33	R. Sanders	1966	6	6	73	"	14	2	60/2		
34	V. Rome	1964	6	12	94	"	21	40	90/2		
35	G. Titus	1961	6	1	104	"	26	23			
36	J. Thompson	1961	6	20	165	"	29	1			
37	L. Green	1962	6	2	84	"	22	17			
38	J. Vernie	1961	6	1	186	"	20	42			
39	Ridge Runners Gun Club, Inc.	1959	6	1	108	Ssg	15	10			
40	Dairy Research Center	1964	6	1	297	Omb	30	23	200/2		
41	H. Prins	1962	6	1	125	"	35	23			
42	R. Abraszynski	1965	6	5	85	"	17	19			
43	R. Ayers	1965	6	3	173	Ombh	24	14	160/2		
44	R. Frey	1966	6	18	95	Omb	23	20	28/2		
45	J. Sailer	1965	6	10	122	Ombh	67	14	60/2		
46	H. Phillips, Jr.	1964	6	1 1/2	221	"	23	20	160/2		
47	D. Keasler	1966	6	1 1/2	247	"	30	12	210/2		
47A	Cooperative Loan & Savings Society	1967	6	6	203	"	42	19	180/3		

WANTAGE TOWNSHIP (Including SUSSEX)

Well No.	Owner	Year Drilled	Cap. dia. (in.)	Yield (gpm)	Depth (ft.)	FORMATION	Screen Setting or depth ccd. (ft.)	Static Water Level (ft.)	Pumping Level/hrs. Pumped	Depth to Bedrock	USE
48	J. Lordy	1964	6	3	130	Ombh	19	17			
49	H. Zabrowski	1966	6	1 1/2	273	"	30	26	210/2		
50	I. Vreeland	1961	6	2	146	Colk	20	62			
51	W. Card	1966	6	2	195	Ombh	121	50			
52	W. Pfizenmayer	1966	6	1	249	"	18	19			
53	H. Haggerty	1965	6	15	210	Omb	25	15	120/2		
54	G. Christy	1957	6	2	225	"	27	19			
55	W. Haggerty	1966	6	10	66	"	42	24			
56	G. Frauenpries	1962	6	2	258	"	146	22	200/2		
57	Rutgers Univ. Research Farm	1964	6	50	152	"	45	6	100/2		
58	Rutgers Univ. Research Farm	1961	6	5	101	"	37	7			
59	R. Burne	1964	6	2	338	"	47	50	300/2		
60	R. Ayers	1956	6	6	83	Omb & dike	19	17	70/2		
61	O. Venden Heuvel	1964	6	2	283	Omb	21	15			
62	Beemerville Fire Co.	1956	6	25	60	"	27	5	20/1	50	
63	Space Farms	1966	6	4	97	"	32	14	60/2		
64	"	1966	6	35	147	"	26	20	100/2		
65	First Presbyt. Church	1958	6	1 1/2	166	"	19 1/2	15			
66	R. Beamer, Jr.	1964	6	5	95	"	28	12			
67	M. Crowell	1956	6	2 1/2	254	"	154	33			
68	W. Systema	1963	6	2 1/2	309	"	100	25			
69	N. Skellenger	1963	6	5	165	"	23	4			
70	C. Longcar	1964	6	12	50	"	23 1/2	11	20/2		
71	C. Petrolevitch	1964	6	12	58	"	20	5	40/2		
72	H. Chapin	1964	6	15	105	"	23	13			
73	G. Schineller	1964	6	4	123	"	52	9	80/2		
74	R. Slate	1964	6	3	198	"	20	6	180/2		
75	J. Kaweska	1966	6	4	172	"	162	2	105/2		
76	W. Aboto	1951	6	1	146	"	35	10			
77	L. Coykendall	1964	6	8	98	"	21	5	60/2		
78	W. Viet	1963	6	7	195	"	73	25			
79	J. Berry	1965	6	2	185	"	101	2	160/2		
80	A. Chase	1965	6	12	197	"	23	10	100/2		
81	H. VanHorn	1965	6	2	124	"	21	32			
82	M. Coyhendal	1965	6	24	72	"	25	18	44/3	12	
83	R. Harde	1965	6	15	72	"	39	5	60/2		
84	C. Rome	1963	6	3	265	"	17	44			
85	C. Albright	1964	6	150	90	Qnd & Omb	90	4	20/2		
86	Jim-B-Farms	1965	6	3	317	Omb	20	8	300/2		
87	R. Fuller	1965	6	4	78	"	13	15			
88	H. Brink	1965	6	12	156	"	17	24	100/2		
89	C. Albright #2	1964	6	60	70	Qnd & Omb	70	24	20/2		
90	F. Huback, Jr.	1964	6	8	108	Omb	24	15			
91	C. Westdyke	1964	6	5	66	"	21	20	50/2		
92	C. Raye	1965	6	6	397	"	35	67	300/2		
93	R. Tuma	1962	6	30	145	"	25	15			
94	D. Bruker	1965	6	1/2	273	"	21	10	200/2		
95	E. McGraw, Jr.	1964	6	2	298	"	10	13	280/2		
96	T. Ryan, Jr.	1962	6	1	167	"	28	25			
97	E. Christensen	1965	6	20	92	"	17	5			
98	F. Dailey	1963	6	2	325	"	21	16			
99	E. Link	1965	6	6	97	"	19	10	80/2		
100	L. Bedell	1964	6	2	130	"	25	20	120/2		
101	D. Richelshagen	1965	6	1	197	"	12	20	190/2		
102	P. Compton	1966	6	8	260	"	20	40	150/2		
103	A. Seideman	1966	6	15	210	"	6	20	80/2		
104	M. Jones #2	1955	6	8	250	"	81	30	110/		
105	G. Schwarz	1965	6	14	142	"	82	32	122/2	58	

Fault?

WANTAGE TOWNSHIP. (Including SUSSEX)

Well No.	Owner	Year Drilled	Cap. dia. (in.)	Yield (gpm)	Depth (ft.)	FORMATION	Screen Section or depth cased (ft.)	Static Water Level (ft.)	Pumping Level/hrs Pumped	Depth to Bottom	USE
106	L. Klaus	1963	6	40	172	Omb	106	6	RU 2		
						Fault?					
107	J. Agliodoro	1966	6	1	222	Omb	150	35	210'2		
108	John Turpin	1967	6	1	479	"	21	56	300'2		
109	C. Feenstra	1963	6	14	155	Qsd	155	57			
110	J. Desmarais	1963	6	1½	246	Omb	30	32	210'2		
111	M. Faul	1963	6	2	247	"	44	9	200'2		
112	S. Heinlein	1961	6	2	698	"	24	32	620'3	12	
113	L. Struble #2	1958	6	11	360	"	24	9½	130		
114	Simmons Realty Company	1963	6	2	297	"	21	16	280'2		
115	"	1963	6	2	297	"	21	22	280'2		
116	H. France	1964	6	4	257	"	40	20	150'2		
117	A. Moraldi, Sr.	1959	6	3	309	"	22	10	bottom		
118	L. Carr	1966	6	3	146	"	32	17	100'2		
119	A. Hutting	1963	6	5	153	"	23	27			
120	Klip & Kurl Beauty Salon	1963	6	1½	297	"	21	15	210'2		
121	B. Paugh	1963	6	12	67	"	67	11	55'2		
122	E. Johnson	1964	6	3	473	"	21	30	460'2		
123	A. Klim	1966	6	2½	683	"	19	3	300'2		
124	J. Noonan	1966	6	6½	122	"	51	18	100'2		
125	C. Lott	1964	6	2½	80	"	17	3			
126	M. Willson	1963	6	1	310	"	27	16			
127	R. Struble	1964	6	7	289	"	22	34	120'2		
128	A. Baker	1964	6	3	247	"	21	25	200'2		
129	L. Willson, Jr.	1964	6	½	293	"	27	50			
130	G. Zimba	1966	6	3	222	"	22	18	200'2		
131	J. Rush	1963	6	4	216	"	57	60	216'2	57	
132	H. Carr	1963	6	15	213	"	28	25	90'2		
133	E. Turner	1963	6	1½	342	"	17	16	300'2		
134	O. Peckham	1963	6	2	144	"	46	51			
135	B. Brink	1963	6	7	72	"	21	10	50'2		
136	M. Smith	1966	6	4½	173	"	18	48	105'2		
137	D. Simmons	1960	6	30	206	"	23	11			
138	J. Illaria	1962	6	2½	143	"	29	22			
139	J. Siple	1962	6	8	157	"	21	5	50'2		
140	R. Pluymers	1966	6	1½	235	"	30	16	210'2		
141	J. Rannon	1966	6	7	98	"	13	30	80'2		
142	W. Gutowski	1962	6	3	143	"	41	27			
143	M. Bombara	1963	6	5	224	"	99	21			
144	N. Van Horn	1963	6	2	100	"	28	20			
145	S. Nemeth	1964	6	5	278	"	182	62	266	170	
146	A. Kaczowski	1963	6	8½	136	"	60	14	100'2		
147	B. VandenBerg	1966	6	1½	271	"	10	26	210'2		
148	F. Rite	1964	6	3	50	"	23	6	15'2		
149	Cre-Art Corp.	1966	6	20	122	"	81	21	85'2		
150	R. E. Baldwin	1966	6	6	333	"	90	20	220'2	90	
151	H. Rome	1962	6	6	120	"	70	29			
152	C. Rome	1962	6	6	135	"	83	37			
153	R. Van Arden	1964	6	9	130	"	90	46	120'2		
154	H. Rome	1963	6	4	137	"	71	37			
155	W. Smith	1964	6	10	170	"	50	65	135'2		
156	L. Cash	1966	6	10	73	"	63	16	50'2		
157	J. Perovich	1966	6	2	297	"	50	42	210'2		
158	V. Cartabona	1964	6	1½	257	"	50	53	200'2		
159	R. Howell	1958	6	6	289	"	62	12			
160	J. Clouse	1963	6	10	143	"	70	29			
161	W. Chasmar	1962	6	10	104	"	25	20			
162	G. Rome, Sr.	1964	6	30	50	"	45	24	30'2		
163	Sussex Co. Bd. of Freeholders										
	Wantage Twp. Garage	1963	6	60	147	"	42	10	40'2		
164	G. Ferretti	1964	6	6	61	"	18	15			
165	W. Chasmar	1964	6	2½	85	"	43	8			

WANTAGE TOWNSHIP (Including SUSSEX)

Well No.	Owner	Year Drilled	Cas. dia. (in.)	Yield (gpm)	Depth (ft.)	FORMATION	Screen Setting or depth (ft.)	Static Water Level (ft.)	Pumping Level/hrs Pumped	Depth to Bedrock	USE
166	J. Healey	1964	6	30	115	Omb	58	4	30.2		
167	Delgrosso Bros., Inc.	1964	6	1 1/2	246	"	20	86			
168	J. Cillarto	1965	6	75	297	"	20	28	200.2		
169	St. Cloud Bldg. Corp.	1958	8	35	833	"	42	50	300.6		I
170	S. Hymes	1964	6	50	150	"	50	74	90.2		
171	Estey Corp.	1963	6	5	371	"	20	13			
172	Simmons Realty Co. #1	1960	8	2	294	"	25	49			I
173	" " " #2	19..	8	30	206	"	23	11			I
174	C. Sarnell	1964	6	35	58	"	55	7	35.2		
175	M. Drake	1964	6	30	94	"	21	6	40.2		
176	E. Decker	1964	6	3	164	"	20	14			
177	Udemac, Inc.	1966	6	4	249	"	32				
178	Ideal Farms, Inc.	1954	6	50	313	"	40	10	95.1		I
179	W. Decker	1962	6	20	176	"	29	21	30.2		
180	G. Moore	1962	6	2	268	"	104	110			
181	J. Jaeger	1964	6	4	135	"	42	9	90.2		
182	M & B Havens	1966	6	1 1/2	323	"	25	18	300.2		
183	B. Havens	1966	6	1 1/2	273	"	20	18	210.2		
184	J. Cosh	1964	6	4	95	"	18	10			
185	E. Katterman	1965	6	30	103	"	22	10	50.2		
186	E. Brialin	1964	6	5	172	"	11	14	150.2		
187	P. O'Biso	1965	6	8	104	"	29	13			
188	High Point Regional High School	1965	8	30	308	"	30	33	250.24		I
189	E. Oliva	1962	6	5	113	"	59	12	90.2		
190	M. Edsall	1963	6	4	97	"	45	32	80.2		
191	Roy Farms, Inc.	1964	6	3	135	"	61	29	90.2		
192	G. Williams	1963	6	20	75	"	19	10			
193	Northern N. J. Bldrs.	1966	6	3	248	"	50	4	180.2		
194	" " " "	1962	6	6	84	"	25	21			
195	" " " "	1966	6	5	270	"	51	45	180.2		
196	J. Moore	1965	6	100	65	"	52	14	40.2		
197	D. Elston	1964	6	100	68	"	57	16	40.2		
198	F. Shields	1964	6	4	82	"	35	21			
199	H. Grohman	1966	6	25	152	"	25	12	85.2		
200	H. Elliott	1966	6	1	396	"	51	26	380.2		
201	W. Scholl	1964	6	2 1/2	172	"	39	11	150.2		
202	W. Stires	1962	6	3 1/2	135	"	23	15			
203	O. Krueger	1954	6	2	200	"	32	13			
204	R. Textor	1956	6	10	90	"	27	13	70.2		
205	P. Grau	1965	6	10	56	"	39	20	45.2		
206	D. Burger	1966	6	20	85	"	17	11	60.2		
207	Dunn & Dunn, Inc.	1966	8	37	326	"	65	8	150.2		I
208	R. Ross	1966	6	1	305	"	38	10	210.2		
209	N. Kemble	1963	6	10	273	Cok	32	74	210.2		
210	D. DeKorte	1963	6	10	125	Ojb	28	43			
211	F. Ackerman	1964	6	5	147	Cok	20	30	135.2		
212	R. Pillar	1965	6	30	115	"	11	46	55.2		
213	W. Boynton	1963	6	12	158	"	43	61	111.3	25	
214	Sussex Redi-Mix Co.	1966	6	5	480	Omb	44	24	300.2		
215	W. Todd	1962	6	18	128	Cok	46	36	65.3	25	
216	A. Weemstra	1966	6	2 1/2	235	Omb	22	20	225.2		
217	A. Ferris	1963	6	4 1/2	145	"	20	9			
218	E. Todd	1964	6	5	106	Cok	20	49	120.2		
219	Holland Amer. Bakery	1964	6	22	90	"	22	4 1/2	40.2		
220	M. L. Willson	1955	6	24	359	"	40	30			
221	Mar-Men Corp.	1955	6	20	116	"	33	3	3 1/2.2		
222	" " " "	1966	6	4	173	"	43	17	160.2		
223	T. Rome	1962	6	20	63	"	20	23			
224	F. Henderson	1964	6	2	196	"	20	45	180.2		
225	P. Bisak	1965	6	40	228	"	51	10	70.2		
226	Sussex Motel, Inc.	1964	6	250	148	"	22	15	120.2		I
227	Wantage Corp.	1959	8	15	262	Omb	31	20	180.6	11	I

WANTAGE TOWNSHIP (Including SUSSEX)
LAKE NEEPAULIN (228-300)

Well No.	Owner	Year Drilled	Cas. Dia. (in.)	Yield (gpm.)	Depth (ft.)	FORMATION	Screen Setting or depth cas. (ft.)	Static Water Level (ft.)	Pumping Level (ft.)	Depth to Bedrock	USE
228	P. Kunz	1962	6	5	338	Omb	50	44			
229	F. Vitale	1958	6	1	289	"	50	162			
230	R. Spooner	1959	6	10	308	"	50	173			
231	H. Klemm	1959	6	1	289	"	50	123	280		
232	F. Castagna	1958	6	3	209	"	50	90			
233	E. Gordon	1962	6	20	84	"	50	28			
234	W. Wessering	1962	6	1	310	"	50	46			
235	L. Guelpa	1959	6	1	289	"	50	104			
236	J. Zapolski	1959	6	8	84	"	50	23			
237	P. Manzi	1955	6	5	81	"	13	12			
238	T. Nolan	1960	6	1 1/2	269	"	50	103	bottom		
239	H. Murray	1965	6	25	270	"	50	68	200/2		
240	G. Cain	1963	6	3	104	"	50	28			
241	C. Williams	1963	6	6	92	"	24	20	70/2	12	
242	I. Pepper	1962	6	1 1/2	183	"	50	37			
243	Lake Neepaulin Land Corp.	1961	6	1	156	"	50	18			
244	R. Trapani	1963	6	2	145	"	50	23			
245	Lake Neepaulin Realty Co.	1959	6	50	125	"	50	14			
246	P. Ryan	1964	6	3	103	"	50	25			
247	J. Barton	1962	6	2	160	"	50	60			
248	L. VanIngen	1964	6	3	247	"	50	120			
249	A. Lange	1964	6	10	176	"	50	25	90/2		
250	L. Grossman	1964	6	3	196	"	50	73	160/2		
251	F. Galardi	1961	6	3	227	"	50	98			
252	R. Tepedino	1959	6	15	146	"	30	63	70		
253	M. Stebner	1958	6	2 1/2	248	"	50	114			
254	C. Smith	1959	6	30	125	"	50	10	20		
255	J. Drazba	1966	6	1	272	"	50	56	210/2		
256	J. Tribuzio	1966	6	2	248	"	50	63	210/2		
257	Lake Neepaulin Land Corp.	1962	6	4	114	"	50	52			
258	W. Degethoff	1961	6	1	339	"	50	115			
259	A. Giagnacovo	1961	6	5	117	"	54	flows			
260	A. Anastasi	1961	6	5	146	"	50	30			
261	W. Oprisko	1959	6	5	105	"	50	flows			
262	R. Sylvester	1959	6	1 1/2	332	"	50	124	1/2 gpm		
263	P. Nigri	1955	6	15	68	"	28	5			
264	N. Costa	1959	6	1	250	"	50	115			
265	Lake Neepaulin Develop. & Bldr.	1955	6	20	75	"	27	8			
266	J. France	1956	6	5	82	"	14	18			
267	J. Stock	1960	6	20	131	"	50	34			
268	F. Johansen	1964	6	2	206	"	50	57			
269	E. Abatist	1963	6	100	150	"	50	60	80/2		
270	L. LeBlanc	1964	6	7	134	"	50	60	100/2		
271	F. Cordasco	1964	6	4	268	"	50	100	200/2		
272	T. Caponigro	1964	6	4	157	"	50	25	100/2		
273	W. Heidepren	1959	6	4	166	"	50	43	120		
274	M. Walsh	1966	6	3	173	"	50	10	150/2		
275	T. Trehy	1966	6	4	197	"	50	50	150/2		
276	O. Jacobsen	1966	6	5	95	"	50	15	80/2		
277	J. Sudol	1966	6	5	349	"	50	20	80/2		
278	B. Sadowski	1958	6	1 1/2	207	"	50	112			
279	H. Payan	1962	6	7	143	"	50	18			
280	P. Litrenta	1966	6	25	123	"	50	18	80/2		
281	V. Tita	1964	6	6	197	"	50	80	150/2		
282	M. Mohr	1962	6	4	113	"	52	5	90/2		
283	H. Bley	1964	6		258	"	50	5	220/2		
284	W. Hintz	1964	6	12	176	"	50	96	160/2		

WANTAGE TOWNSHIP (Including SUSSEX)
LAKE NEEPAULIN (228-300)

Well No.	Owner	Year Drilled	Cas. dia. (in.)	Yield (gpm.)	Depth (ft.)	FORMATION	Screen Setting, or depth cas. (ft.)	Static Water Level (ft.)	Pumping Level/Hrs. Pumped	Depth to Bedrock	USE
285	S. Paulter	1965	6	50	73	Omb	50	10	60'2		
286	R. Woodhull	1964	6	7	166	"	50	78			
287	E. Porto	1963	6	5	104	"	50	45			
288	L. VanHouten	1963	6	20	104	"	50	18			
289	W. Herlihy	1962	6	15	84	"	50	18			
290	S. Barbieri	1958	6	4	207	"	50	142			
291	R. Breen	1964	6	1	448	"	32	58	350'2		
292	G. McManus	1961	6	20	105	"	50	9	80		
293	S. Parcase	1962	6	2	165	"	50	10			
294	P. Ablequest	1964	6	7	105	"	50	20	90'2		
295	G. Panico	1963	6	15	125	"	50	8			
296	J. Kramer & R. Sihksnel	1962	6	5	145	"	50	38			
297	B. Lamberechts	1961	6	1 1/2	167	"	50	47			
298	H. Rome	1964	6	8	100	"	88	32	105'2		
299	N. Cerrito	1964	6	15	238	"	15	15	60'2		
300	Lake NeePaulin Constr. Co.	1966	6	9	73	"	50	27			

Drillers' Logs of Wells, Wantage Township
(Depths below land surface are given in feet)

Well #	Depth	Log	Formation	Well #	Depth	Log	Formation
3	0-49	Hardpan		105	0-25	Hardpan and large boulders	
	-104	Gray rock	Omb		-35	Boulders, gravel and water	
4	0-58	Hardpan and boulders			-58	Blue clay	
	-122	Gray rock	Omb		-65	Broken-up rock	
5	0-76	Hardpan and boulders			-100	Blue shale rock	Omb
	-112	Gray rock	Omb		-125	Hard, gray rock	
6	0-20	Hardpan			-142	Soft, brown, "honey comb" rock	
	-35	Slate rock	Omb	112	0-12	Hardpan	Omb
7	0-106	Blue clay			-125	Blue shale rock	
	-181	Slate	Omb		-200	Gray rock, hard	
8	0-17	Hardpan			-300	Blue shale rock	
	-47	Hard slate	Omb		-443	Gray rock, hard	
11	0-8	Soil, hardpan and gravel			-580	Blue shale rock	
	-210	Slate	Omb		-650	Gray rock, hard	
15	0-30	Clay			-698	Blue shale rock	
	-102	Shale	Omb	119	0-17	Sandy overburden	Omb
16	0-3	Soil			-155	Shale rock	
	-346	Slate	Omb	131	0-12	Hardpan	
22	0-36	Sand and gravel			-48	Clay	
23	0-52	Clay and gravel			-216	Blue limestone	Col
	-220	Slate	Omb	144	0-12	Hardpan and clay	
24	0-54	Clay and gravel			-100	Slate and blue stone	Omb
	-120	Slate	Omb	145	0-50	Hardpan and boulders	
47A	0-20	Hardpan and boulders			-75	Blue clay, boulders and gravel	
	-30	Boulders, gravel and water			-125	Blue clay, gravel and water	
	-34	Gravel, sand and water			-150	Blue clay and boulders	
	-100	Blue shale rock	Omb		-162	Boulders	
	-152	Hard, gray rock			-170	Blue clay and broken-up rock	Omb
	-186	Blue shale			-200	Blue shale rock	
	-203	A soft, brown sandstone			-222	Hard, gray rock	
62	0-40	Sandy clay			-278	Blue shale rock	
	-60	Shale	Omb	150	0-9	Overburden	
82	0-12	Hardpan and broken-up rock			-335	Blue stone and slate	Omb
	-25	Hard, black rock	Omb	169	0-5	Earth and clay	
	-72	Black shale rock			-833	Gray slate rock	Omb

REFERENCE NO. 11

D. Kovach
J. Ragsdale
D. Lehman

AMES
RUBBER CORPORATION
Excellence Through Total Quality

HEADQUARTERS

Ames Boulevard
Hamburg, New Jersey 07419
201-827-9101
FAX 201-827-8893

MIDWEST OFFICE

2537 Curtiss Street
Downers Grove, Illinois 60515
708-964-2440

July 20, 1992

Mr. Steve Urbanik
NJ Department of Environmental Protection
and Energy
Division of Water Resources
Bureau of Groundwater Quality Management
401 East State Street
CN 028
Trenton, NJ 08625

Re: Ames Rubber Corporation - Wantage Facility
NJPDES DGW Permit NJ0098639
Wantage Township, Sussex County

Dear Mr. Urbanik:

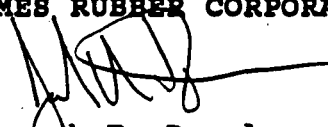
This will serve to confirm our telephone conversation of this date. The Department's letter dated July 13, 1992 constitutes the NJDEPE's final selection of the remedial action alternative for the referenced site. In accordance with Para. 23 of the ACO dated August 23, 1988, Ames shall submit to NJDEPE a detailed draft remedial action plan within the specified timeframe.

As we discussed, production well PW 3 is intended to be used as a back-up source only, upon completion of the groundwater treatment system. Treated groundwater will meet all of our routine process water requirements. Therefore, treatment of the water from PW 3 is not required at this time.

Thank you very much for your assistance and timely response. If you have any questions, please feel free to call.

Sincerely,

AMES RUBBER CORPORATION


Joseph R. Douglass
Director of Regulatory Affairs

JRD:kc

REFERENCE NO. 12



State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER RESOURCES
CN 029
TRENTON, NEW JERSEY 08625

GEORGE G. McCANN, P.E.
DIRECTOR

DIRK C. HOFMAN, P.
DEPUTY DIRECTOR

IN THE MATTER OF	:	ADMINISTRATIVE
AMES RUBBER CORPORATION	:	CONSENT
WANTAGE TOWNSHIP,	:	ORDER
SUSSEX COUNTY	:	

This Administrative Consent Order is entered into pursuant to the authority vested in the Commissioner of the New Jersey Department of Environmental Protection (hereinafter "NJDEP") by N.J.S.A. 13:1DA-1 et seq., and the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., and duly delegated to the Assistant Director of Enforcement of the Division of Water Resources pursuant to N.J.S.A. 13:1B-4.

FINDINGS

1. Ames Rubber Corporation (hereinafter "Ames Rubber") owns and operates a manufacturing facility (hereinafter "site") located in Wantage Township, Sussex County (Block 7; Lot 8 of the Township of Wantage Tax Map). At this site Ames Rubber manufactures automobile suspension boots and custom elastomeric coated metal products for the office and copying industries (SIC Code 3069).
2. The site is underlain by the Allentown Formation, a dolomitic rock (magnesian limestone). The dissolution of the limestone can produce rocks of high permeabilities and therefore wells of high yield.
3. In its operations, Ames Rubber uses various solvents, including 1,1,1 trichloroethane, methylene chloride and methyl ethyl ketone.
4. On or about July 12, 1984, Ames Rubber sampled one of the facility's two potable water supply wells. The results of the sampling indicated that the ground water under the site was contaminated with pollutants as defined by N.J.S.A. 58:10A-13, including but not limited to 44 parts per billion (ppb) of 1,1 dichloroethane, 65 ppb of 1,1 dichloroethylene and 580 ppb of 1,1,1

trichloroethane, to a depth of 300 feet (the depth of the potable well). The second potable well, 96 feet deep, was subsequently sampled and the results indicated that it contained 34 ppb of 1,1 dichloroethane, 98 ppb of 1,1 dichloroethylene, and 1100 ppb of 1,1,1 - trichloroethane. These pollutants were discharged into the ground water in violation of the New Jersey Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq.

5. Results of analyses dated November 29, 1984 indicated that a private potable well approximately 150 feet northeast of the site was contaminated with 360 ppb of 1,1,1 trichloroethane. Ames Rubber has provided bottled water to the household serviced by the well as an alternate source of potable water.
6. By letter dated February 20, 1985, Ames Rubber informed NJDEP that the company intended to retain the services of Lion Technology, Inc. as a consultant to delineate the extent of ground-water pollution and to make recommendations to Ames Rubber on ways of mitigating or eliminating the problems.
7. On August 1, 1985 Ames Rubber submitted a report entitled Phase 1, Site Investigation at the Ames Rubber Corporation, Plants 2 and 3, Wantage, New Jersey. The report included a proposal to conduct an investigation to determine the source(s), areal extent, and nature of the ground-water and surface-water contamination. The proposed investigation included the collection and analysis of ground-water and surface-water samples from the site. The objective of the Phase I investigation was to evaluate the degree of risk posed to human health and the environment by conditions at the site for the purpose of developing acceptable mitigation measures.
8. By letter dated December 21, 1985, NJDEP approved Ames Rubber's Phase I investigation submitted to NJDEP as an interim proposal subject to certain conditions. NJDEP's letter also informed Ames Rubber that the company would receive from NJDEP an Administrative Consent Order for execution. The Administrative Consent Order would contain, among other items, additional requirements for the investigation and cleanup of the site.
9. On May 2, 1985, Ames Rubber submitted a complete NJPDES/DSW permit application for a surface water discharge permit for outfalls D001 and D002.
10. Based on these FINDINGS, NJDEP has determined that Ames Rubber has violated the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., specifically N.J.S.A. 58:10A-6, and the regulations promulgated pursuant thereto, N.J.A.C. 7:14A-1 et seq., specifically N.J.A.C. 7:14A-1.2(c), by discharging pollutants into waters of the State or onto lands or into wells from which it might flow or drain into said waters without a valid NJPDES permit.
11. To determine the nature and extent of the problem presented by the discharge of pollutants at the site and to develop environmentally sound remedial actions, it is necessary to conduct a remedial investigation and feasibility study of remedial action

alternatives (hereinafter "RI/FS") for the site. To correct the problems presented by the discharge, it may be necessary to implement a remedial action plan.

12. To resolve this matter without the necessity for litigation, Ames Rubber has agreed to conduct an RI/FS and to implement the remedial action alternative selected by NJDEP should a remedial action plan be necessary to remedy all pollution at and/or emanating from the site. Nothing in this Administrative Consent Order shall be construed in any manner as an admission of any fact or liability by Ames Rubber.

ORDER

NOW THEREFORE IT IS HEREBY ORDERED AND AGREED THAT:

I. Remedial Investigation and Cleanup

A. Remedial Investigation

13. Ames Rubber shall conduct the remedial investigation in accordance with the RI Work Plan and the schedule therein dated September 30, 1987 and as appropriately modified and approved by NJDEP's letter of December 9, 1987.
14. Ames Rubber shall submit to NJDEP a draft Remedial Investigation Report (hereinafter "RI Report") in accordance with Appendix A.
15. If upon review of the draft RI Report NJDEP determines that additional remedial investigation is required, Ames Rubber shall conduct additional remedial investigation as directed by NJDEP and submit a second draft RI Report.
16. Within thirty (30) calendar days after receipt of NJDEP's written comments on the draft or second draft (if applicable pursuant to the preceding paragraph) RI Report, Ames Rubber shall modify the draft or second draft RI Report to conform to NJDEP's comments and shall submit the modified RI Report to NJDEP. The determination as to whether or not the modified RI Report, as resubmitted, conforms with NJDEP's comments shall be made solely by NJDEP.

B. Feasibility Study

17. Within sixty-five (65) calendar days after receipt of NJDEP's written final approval of the RI Report, Ames Rubber shall submit to NJDEP a draft Feasibility Study Work Plan (hereinafter, "FS Work Plan") in accordance with the scope of work set forth in Appendix B which is attached hereto and made a part hereof.
18. Within thirty (30) calendar days after receipt of NJDEP's written comments on the draft FS Work Plan, Ames Rubber shall modify the draft FS Work Plan to conform to NJDEP's comments and shall submit the modified FS Work Plan to NJDEP. The determination as to whether or not the modified FS Work Plan, as resubmitted, conforms to NJDEP's comments shall be made solely by NJDEP.

19. Upon receipt of NJDEP's written final approval of the FS Work Plan, Ames Rubber shall conduct the feasibility study in accordance with the approved FS Work Plan and the schedule therein.
20. Ames Rubber shall submit to NJDEP a draft Feasibility Study Report (hereinafter "FS Report") in accordance with Appendix B and the approved FS Work Plan and the schedule therein.
21. Within thirty (30) calendar days after receipt of NJDEP's written comments on the draft FS Report, Ames Rubber shall modify the draft FS Report to conform to NJDEP's comments and shall submit the modified FS Report to NJDEP. The determination as to whether or not the modified FS Report, as resubmitted, conforms to NJDEP's comments shall be made solely by NJDEP.

C. Remedial Action

22. NJDEP will make the final selection of the remedial action alternative.
23. Within sixty (60) calendar days after receipt of NJDEP's written notification of selection of a remedial action alternative, Ames Rubber shall submit to NJDEP a detailed draft Remedial Action Plan in accordance with the scope of work set forth in Appendix C which is attached hereto and made a part hereof.
24. Within thirty (30) calendar days after receipt of NJDEP's written comments on the draft Remedial Action Plan, Ames Rubber shall modify the draft Remedial Action Plan to conform to NJDEP's comments and shall submit the modified Remedial Action Plan to NJDEP. The determination as to whether or not the modified Remedial Action Plan, as resubmitted, conforms to NJDEP's comments shall be made solely by NJDEP.
25. Upon receipt of NJDEP's written final approval of the Remedial Action Plan, Ames Rubber shall implement the approved Remedial Action Plan in accordance with the schedule therein.

D. Additional Remedial Investigation and Remediation

26. If NJDEP determines at any time prior to the termination of this Administrative Consent Order that additional remedial investigation and/or remediation is required to protect human health or the environment, Ames Rubber shall conduct such additional activities as directed by NJDEP. Any actions taken by NJDEP pursuant to this paragraph shall not be unreasonable, arbitrary, or capricious.

E. Progress Reports

27. Ames Rubber shall submit to NJDEP quarterly progress reports; the quarters being January through March, April through June, July through September, and October through December of each calendar year. Each progress report shall be submitted on or before the 30th day of the month following the quarter being reported. The first progress report shall be due to NJDEP on or before the

thirtieth (30th) day of the month following the first full quarter as indicated above. Each progress report shall detail the status of Ames Rubber's compliance with this Administrative Consent Order and shall include the following:

- a. Identification of site and reference to this Administrative Consent Order;
- b. Status of work at the site and progress to date;
- c. Difficulties or problems encountered during the reporting period;
- d. Actions taken or to be taken to rectify difficulties or problems;
- e. Activities planned for the next reporting period;
- f. Required and actual completion dates for each item required by this Administrative Consent Order;
- g. An explanation of any noncompliance with the approved work plan(s), Remedial Action Plan or schedule(s);
- h. All data collected, including quality assurance evaluations with supporting documentation, and field observations;
- i. A discussion of performance evaluation of all remedial measures implemented to date.

II. Permits

28. This Administrative Consent Order shall not relieve Ames Rubber from obtaining and complying with all applicable Federal, State, and local permits, as well as all applicable statutes and regulations while carrying out the obligations imposed by this Administrative Consent Order.
29. Within forty-nine (49) calendar days after the effective date of this Administrative Consent Order, Ames Rubber shall apply for all necessary Federal, State and local permits for existing activities and, where applicable, former activities, in accordance with the requirements of N.J.A.C. 7:14A-1 et seq., N.J.A.C. 7:26-1 et seq., and N.J.A.C. 7:27-8, and other applicable statutes and regulations.
30. Ames Rubber shall submit complete applications for all Federal, State and local permits required to carry out the obligations of this Administrative Consent Order in accordance with the preceding paragraph and the approved time schedules.
31. Within twenty-eight (28) calendar days of receipt of written comments concerning any permit application to a Federal, State or local agency, or sooner if required by the permitting agency, Ames Rubber shall modify the permit application to conform to the

agency's comments and resubmit the permit application to the agency. The determination as to whether or not the permit application, as resubmitted, conforms with the agency's comments shall be made solely by the agency.

32. This Administrative Consent Order shall not preclude NJDEP from requiring that Ames Rubber apply for any permit or permit modification issued by NJDEP under the authority of the Water Pollution Control Act, N.J.S.A. 58:10A-1 et seq., the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq., and/or any other statutory authority for the matters covered herein. The terms and conditions of any such permit shall not be preempted by the terms and conditions of this Administrative Consent Order even if the terms and conditions of any such permit are more stringent than the terms and conditions of this Administrative Consent Order. To the extent that the terms and conditions of any such permit or permit modifications are consistent with the terms and conditions of this Administrative Consent Order, Ames Rubber waives its right to contest such terms and conditions in any future permit or permit modification proceeding.

III. Project Coordination

33. Ames Rubber shall submit to NJDEP all documents required by this Administrative Consent Order, including correspondence relating to force majeure issues, by certified mail, return receipt requested or by hand delivery with an acknowledgement of receipt form for NJDEP's signature. The date that NJDEP executes the receipt or acknowledgement will be the date NJDEP uses to determine Ames Rubber's compliance with the requirements of this Administrative Consent Order and the applicability of stipulated penalties. NJDEP will exercise due diligence in executing the documents.
34. Within seven (7) calendar days after the effective date of this Administrative Consent Order, Ames Rubber shall submit to NJDEP the name, title, address and telephone number of the individual who will be NJDEP's contact with Ames Rubber for all matters concerning this Administrative Consent Order. Ames Rubber shall contact the individual identified in the following paragraph for all matters concerning this Administrative Consent Order.
35. Ames Rubber shall notify NJDEP two weeks prior to the initiation of all field activities.
36. Ames Rubber shall submit three (3) copies of all documents required by this Administrative Consent Order to:

Joseph M. Mikulka, Chief
Northern Bureau of Regional Enforcement
Division of Water Resources
1259 Route 46 East - Building 2
Parsippany, New Jersey 07054

and shall submit one (1) copy of all documents to:

Stephen Johnson, Chief
Bureau of Ground Water Discharge Control
Division of Water Resources
401 East State Street, CN-029
Trenton, New Jersey 08625

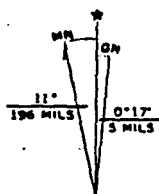
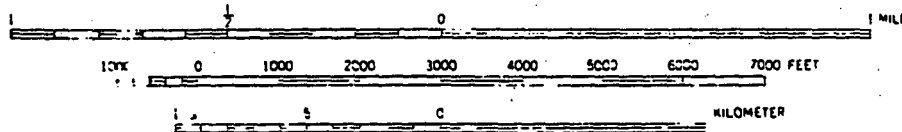
IV. Financial Requirements

A. Financial Assurance

37. Within twenty-one (21) calendar days after the effective date of this Administrative Consent Order, Ames Rubber shall submit to NJDEP a proposed irrevocable letter of credit which meets the following requirements:
 - a. Is identical to the wording specified in Appendix D which is attached hereto and made a part hereof;
 - b. Is issued for one year and in the event that the issuing bank or financial institution is subject to Title 17 of the Revised Statutes of New Jersey, shall not be automatically renewable but shall be renewable upon reapplication and review only;
 - c. Is issued by a New Jersey State or Federally chartered bank, savings bank, or savings and loan association which has its principal office in New Jersey.
38. Within twenty-one (21) calendar days after the effective date of this Administrative Consent Order, Ames Rubber shall submit to NJDEP a proposed irrevocable standby trust fund agreement which meets the following requirements:
 - a. Is identical to the wording specified in Appendix E which is attached hereto and made a part hereof;
 - b. The irrevocable standby trust fund shall be the depository for all funds paid pursuant to a draft by NJDEP against the letter of credit;
 - c. The trustee shall be an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or New Jersey agency;
 - d. Is accompanied by a certification of acknowledgement that is identical to the wording specified in Appendix E.
39. Within fourteen (14) calendar days after receipt of NJDEP's written comments on the proposed letter of credit, the proposed trust agreement, and the proposed certification of acknowledgement, Ames Rubber shall modify the documents to conform to NJDEP's comments and resubmit them to NJDEP.

REFERENCE NO. 13

SCALE 1:24000



GRID AND 1954 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET



QUADRANGLE LOCATION

RECONNAISSANCE MAP OF THE GLACIAL GEOLOGY OF THE HAMBURG QUADRANGLE, NEW JERSEY

By

Scott D. Stanford and David P. Harper

1985

REFERENCE NO. 14

RAI MEMORANDUM OF TELEPHONE CONVERSATION

PROJECT # A4020-200-05-40A DATE 8/14/12 TIME 2:00 PM
 PROJECT NAME ARCS II Amers Rubber PA
 BETWEEN Sastri Vadavalli, RAI AND Mr. Keith Arneson, meteorologist
 FIRM NJDEPE
 ADDRESS Newton, NJ
 TEL. NUMBER (609) 292-0424

CALL PLACED BY: ☒ RAI

☐ OTHER PARTY

SUBJECT Precipitation Data

DISCUSSED Sastri called to obtain county annual precipitation data.

For Sussex County, average rainfall = 45.39 inches at Sussex
= 44.03 in at Newton

Newton is selected as county seat, so we will use 44 inches per
year.

☐ NEEDS FOLLOW-UP

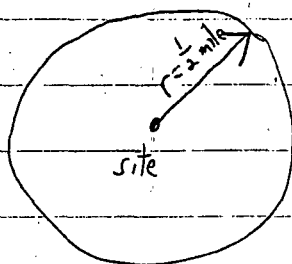
R. Arneson
 SIGNATURE

g:\misc\teleform

REFERENCE NO. 15

Acceage Calculations

Wetlands with 1/2 mile of site



Based on USGS Topo map (Hamburg) it is estimated that $\frac{1}{5}$ of the area within the 1/2 mile radius "ring" is wetland area.

$$\frac{1}{2} \text{ mile} = \frac{1}{2} (5,280 \text{ ft.}) = 2640 \text{ ft.}$$

$$A = \text{Area of } \frac{1}{2} \text{ mile ring} = \pi (2640 \text{ ft.})^2 = 21,895,644 \text{ ft.}^2$$

$$\text{Since } 1 \text{ acre} = 43,560 \text{ ft.}^2, \quad A = \frac{21,895,644 \text{ ft.}^2}{43,560 \text{ ft.}^2/\text{acre}} = \underline{502.7 \text{ acres}}$$

Assuming $\frac{1}{5}$ of the area to be wetlands (a fairly high estimate);

$$\text{the wetlands area} = (.20) (502.7 \text{ acres}) = \boxed{100.5 \text{ acres}}$$

Philand Ogem, RKT

REFERENCE NO. 16

RAI MEMORANDUM OF TELEPHONE CONVERSATION

PROJECT NUMBER A4020-001 DATE 8/18/92 TIME 1:20 p.m.

PROJECT NAME EBASCO PAs

BETWEEN Alan Supple AND Daniel Van Hoes, Ph.D.

FIRM NJDEP Wellhead Protection Program ADDRESS Trenton NJ

TELEPHONE NUMBER 609/683-1177 (Regional Water Supply Planning)

CALL PLACED BY:

☒ RAI

☐ OTHER PARTY

SUBJECT Definition of a well head protection area.

DISCUSSED The Wellhead Protection^(WP) Program is a Federally overseen, state-run program. Currently, New Jersey have an approved plan and set of delineation regulations, but no delineated WP areas.

The WP program is defined under the Safe Drinking Water Act, and is designed to protect groundwater flowing into public water wells.

The criteria used for delineation are based on water travel time. The outer limit of the WP area is 2 at the point where it would take GW 12 years to reach the well, based on GW modelling.

Another definition is 2000 feet around a well.

This applies only to public water supplies, not private wells.

☐ NEED FOLLOW-UP

Alan h. Supple
SIGNATURE